FIRE ENGINEERING

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The Journal of the Fire Protection Profession Since 1877

DECEMBER, 1945

Fire, Following Explosion, Destroys Two 150,000-Barrel Oil Tanks.

A CASE - SHEPPERD - MANN PUBLICATION

And at Christmas too

Emerson Resuscitators are on the job preventing unnecessary asphyxial death.

This Christmas will be highly significant in that many veterans will be returning to the fire service and to rescue work. Here, the lucky ones will find smoke suffocation, drowning, electric shock, gas poisoning and other asphyxia under good control, thanks to their ever dependable and effective

EMERSON RESUSCITATOR

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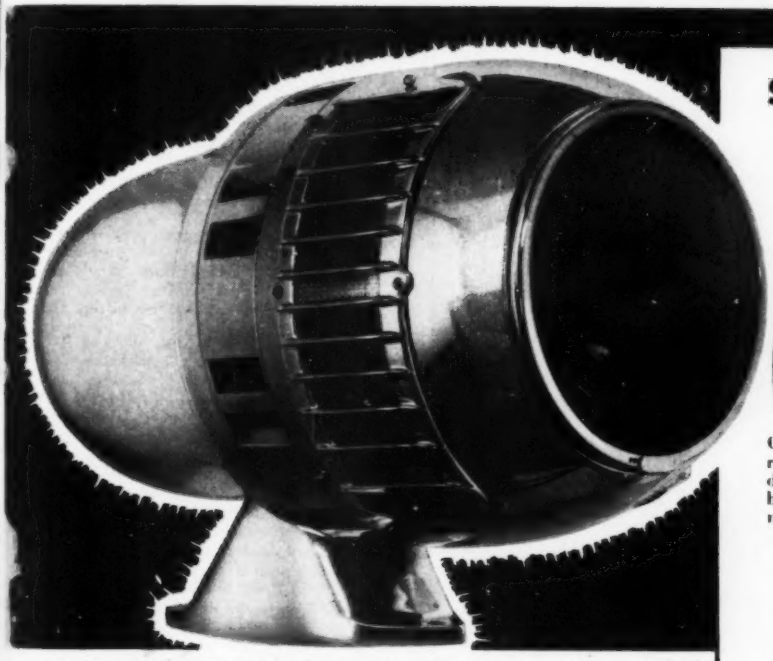
How FEDERAL Sirens are designed for life-saving dependability



tration shows the handsome Model C-5, Coaster Siren. Clutch release on rotor permits full 3-ste roll; electric coaster brake if desired. Flashing red light or grille front. Size: 16" long, 9" high; weight 25 lbs. Massive; durable; one of Federal's most powerful sirens for emergency vehicles.

The instant that separates safety from danger is so short that a vehicle siren must have the clearest, most recognizable tone possible, and the siren must be absolutely dependable.

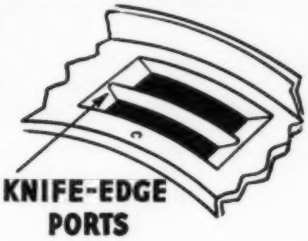
Federal Sirens are meticulously designed and accurately built. The results are instant starting, long life, dependability, and a deep, powerful tone that penetrates far ahead, through other traffic sounds. For penetration, clear, true pitch is essential. Federal gets this with square, knife-edge ports, accurately spaced around rotor and stator; with thin, smooth blades; and with individually balanced rotors to avoid muffling vibration.

Handsome streamlined housing protects and encloses all working parts, and lends massive appearance to this big siren. Federal makes many types of sirens, at various prices. Choice of coaster or regular models; flashing or motor-driven oscillating lights; various mountings. Federal features assure greatest possible safety, dependability; longest trouble-free operation. Write for details and prices today—get the booklet at right.

SOME FEDERAL FEATURES

THIN SMOOTH BLADES

Cast aluminum or die-cast zinc alloy rotors, accurately machined, individually balanced. Thin, smooth blades handle large air volume with minimum current consumption.



KNIFE-EDGE PORTS

Square knife-edge ports assure even cut-off and true-pitched penetrating roar. Ports are spaced at exact intervals around rotor and stator, and balanced with motor speed for correct deep pitch throughout entire tone range.

Heavy duty long-life motors; ball bearings. Vehicle models 6 or 12 volts DC; others from 6 to 250 volts DC or 25 or 60 cycle AC.

Get Bulletin Free

Details, illustrations, and prices on this and other types of Federal Sirens, horns, and signals. Write today.

FEDERAL ELECTRIC COMPANY, INC.

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FIRE ENGINEERING

A Consolidation of FIRE AND WATER ENGINEERING, THE FIRE ENGINEER, FIRE PROTECTION *and* FIRE SERVICE

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FRED SHEPPERD
Editor

ROI B. WOOLLEY
Assistant Editor

Time to Roll up the Sleeves

THIS is the time of the year to take stock—and take action. The end of the most costly, terrible war in history leaves the fire service war-weary, undermanned and under-equipped after an epochal four-year fight to hold fire losses to the minimum—a fight that cannot be abated for a moment.

● All the war hangover problems of demobilization, unemployment, surplus property disposal and inflation that plague government and industry have a direct bearing on the nation's fire losses, and on its fire service.

● While being thankful that the carnage is over, key men of the fire service are wide awake to the post-war problems that face them. They see the need of revitalizing their fire prevention and protection methods, apparatus and equipment. They've given the fire appliance manufacturers their ideas of the types and kinds of apparatus and equipment they want—and need (as you will see by reading further in this issue). And the manufacturers have rolled up their sleeves; they are speeding plans to increase production and bring their products in line with the needs of the fire service.

● Their activity is mirrored in the increasing number of manufacturer announcements in Fire Engineering—an advertising increase which is being balanced by a corresponding increase in editorial contents. All to the good! Fire Engineering and its great field of activity are both rolling up their sleeves!

Season's Greetings!

The Publishers

FIRE ENGINEERING

The Journal of the Fire Profession since 1877; published on the fifteenth of each month by Case-Shepperd-Mann Publishing Corp., 24 West 40th St., New York 18, N. Y., also publishers of *Water Works Engineering, Sewage Works Engineering*, etc. ¶Subscription price U. S. and Latin America, $2.50 a year; Canada, $3; Foreign, $3.50; Single copies, 25c. ¶Member of Audit Bureau of Circulations and Associated Business Papers, Inc. ¶Entered as second-class matter April 15, 1929, at the Post Office at New York, N. Y., under Act of March 3, 1879. ¶Contents of this issue copyrighted, 1945, by Case-Shepperd-Mann Publishing Corp. President and Advertising Director, KARL M. MANN; Vice-President and General Manager, I. HERBERT CASE; Secretary and Editorial Director, FRED SHEPPERD; Assistant Advertising Director, WALTER H. FREDRICKS; Advertising Manager, WILLIAM J. GIBSON; Circulation Manager, W. H. TOPHAM. CHICAGO OFFICE: W. S. CLEVENGER and L. M. ROCHE, 6 No. Michigan Ave., Chicago 2, Ill.; SAN FRANCISCO: CHARLES H. WOOLLEY, 605 Market Street, San Francisco 5, Calif.; LOS ANGELES: AUGUST HAURIN, 6000 Miramonte Blvd., Los Angeles 1, Calif. ¶Printed in U. S. A.

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PERFORMANCE COUNTS!

SPRINGFIELD'S NEW PUMPER IS WAY ABOVE PAR!

This Mack Type 85 Pumper was recently delivered to the Fire Department of Springfield, Oregon. In tests held on the bank of the Willamette River, it pumped 1,023 gallons of water per minute at 150 pounds pressure—considerably more than requirements call for.

Similar Mack units have been delivered to, or are on order for, the following other Oregon cities: Portland, Albany, Park Rose, Astoria, and The Dalles.

MACK MANUFACTURING CORPORATION, FIRE ENGINE DEPARTMENT, EMPIRE STATE BUILDING, NEW YORK 1, N. Y.

PERFORMANCE COUNTS!

Mack
FIRE APPARATUS

If your community needs additional fire-fighting equipment or replacements, think of Mack. Remember, Mack Fire Apparatus is backed by the greatest engineering resources in the industry.

Kindly mention FIRE ENGINEERING *when writing advertisers*

Only the Scott A

1 READY INSTANTLY

Completely donned in less than one minute. No lengthy and worrisome makeready time.

2 INVIGORATING COOL AIR

You bring fresh, cool air to the hazard—don't refine it at the scene.

3 NO LENS FOGGING

Absolutely clear lenses while using. The pure, cool breathing air prevents all fogging.

4 FULL-VISION FACE SET

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5 FREEDOM OF MOTION

Carried easily, conveniently, and always in a balanced position. No hindering of normal movement. No air feed lines to snarl.

6 LIGHT WEIGHT

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7 LONG CYLINDER LIFE

38.4 cu. ft. cylinder, one hour breathing air under normal conditions. 28.8 cu. ft. cylinder, 45 minutes under normal conditions. 11 cu. ft. sling type unit, 16 minutes under normal conditions.

8 COMPLETE PROTECTION

Complete protection in all breathing hazards except where atmospheres poison through the skin.

9 WORKING EQUIPMENT

All-purpose working equipment—not just rescue apparatus.

10 LUMINOUS AIR GAUGE

High pressure gauge provides 100% safety factor above the normal charging pressure of the cylinder.

11 COMFORTABLE HARNESS

2½" neotexed cotton webbing with snap clips and self-locking slide buckles permits quick adjustment to any size torso.

12 QUICK CONNECT AIR SUPPLY CONSERVOR

Exclusive Air-Pak feature. Permits breathing through open end of face hose until entering hazard area. Conserves air supply.

13 TESTED HUNDREDS OF THOUSANDS OF HOURS

Over 100,000 of essentially the same assemblies were produced for the Army Air Corps and used in high altitude flying, the greatest service test imaginable.

14 UNDER-WATER APPLICATION

Free, easy, under-surface breathing. Tested and proven safe in water to depths of 35 feet. Exclusively an Air-Pak feature.

15 2 MODELS—SAME FEATURE

Back pack and sling type units embody the same important safety and construction features—varying only in size of compressed air cylinder.

2 back pack models—the first with 38.4 cu. ft. of free air; the second with 28.8 cu. ft. of air, stored at 1800 lbs. pressure.

The sling type model contains 11 cu. ft. of free air, stored at 1800 lbs. pressure.

. . . BREATHE FRESH COOL AIR IN EVERY BREATHING HAZARD

Air-Pak gives you ALL 15 POINTS of SUPERIORITY in EVERY BREATHING HAZARD

The Scott Air-Pak is a self-contained breathing apparatus which delivers to the user, through a demand-type regulator, fresh, cool breathing air —not oxygen—for every breathing hazard. The air supply is carried to the hazard under compression in a strong, light-weight cylinder. No chemicals are used. No rebreathing of stale air. The basic principle of the Scott Air-Pak design is the same as utilized by many thousands of our Air Force flying personnel who have had to depend on this type of equipment for life itself during all high altitude missions. The Scott Air-Pak is made in both back and sling types.

The first principle and design innovation in self-contained breathing apparatus in many years, the Scott Air-Pak offers a wide variation in fire department and industrial use both as working equipment and for emergency or rescue work. Ideal also for police and park departments, marine, railroad and truck carriers and for laboratory and general use. Popular with all who have tested it because of its light weight and long dependable air cylinder life. Every safeguard has been provided in the complete apparatus. Write today for 12-page illustrated catalog giving the complete details and specifications of the various Scott Air-Pak units. Scott Aviation Corporation, Safety Equipment Division, 207 Erie St., Lancaster, N. Y.

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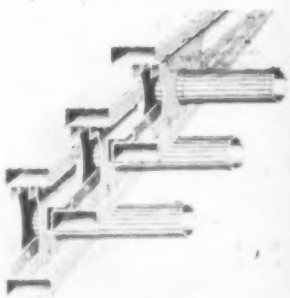
Tubular Strength **is the outstanding achievement of these new Aluminum Fire Ladders by Duo Safety. Fire Departments from coast to coast are adopting them as standard equipment because their perfection of design and construction makes them leaders in both value and safety. Look to Duo Safety for your new ladder equipment . . . America's first family of fire ladders.**

* **Duralumin**

500 SERIES TUBULAR LADDER→

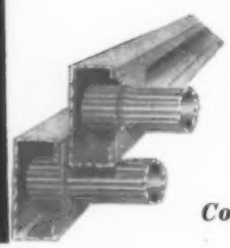
for service trucks

This series features tubular construction as illustrated to the right. Includes Series 500-A, 2 section extension in lengths to 60 feet; Series 525-A, 3 section extension in lengths to 65 feet, Series 550-A, wall ladders in all standard sizes; Series 575-A, roof ladders with Duo Safety exclusive roof hook, and Series 585-A, folding ladders.



←700 SERIES CHANNEL LADDER

the companion model for Pumper use



As a companion model to the 500 series above, Duo Safety has developed the 700 series for Pumper use. The 700 series is of channel construction as illustrated to the left. Includes four models, each in all standard lengths, as follows: Series 700A, 2 section extension; Series 725A, 3 section extension; Series 750A, wall ladders; and series 775A, roof ladders.

Complete information is yours for the asking—

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No Delay! You are Ready to "Go" the Moment You Arrive at the Fire

The FMC High-Pressure Fog Fire Fighter carries its own water supply and complete fire fighting equipment. So — you are ready for instant action.

There are two fog guns of 30 gallons each at 600 lbs. or more nozzle pressure. The flow of these guns can be adjusted to produce any type of fog formation that may be needed — from a wide, dense fog pattern to a straight power stream.

It's the Pressure and the Pump!

The FMC High-Pressure Pump — built by Bean — packs the needed punch to produce and maintain *800 lbs. pump pressure*— better than *600 lbs. nozzle pressure.*

The high-pressure provides a combination of high velocity and finely atomized water — just what you need to *blast, cool* and *smother* flame.

One gallon of this steam-like water fog, properly used, has fire quenching possibilities many times that of low pressure water.

Restrictions Lifted!

Investigate this revolutionary method of fire fighting. It's not a bit too early to start plans for the modernization of your department.

FMC High-Pressure Fog Fire Fighters may now be purchased for civilian use. Orders should be placed promptly to insure early delivery.

YOU CAN MODERNIZE — NOW!

Illustration shows latest type Standard FMC Fog Fire Fighter.

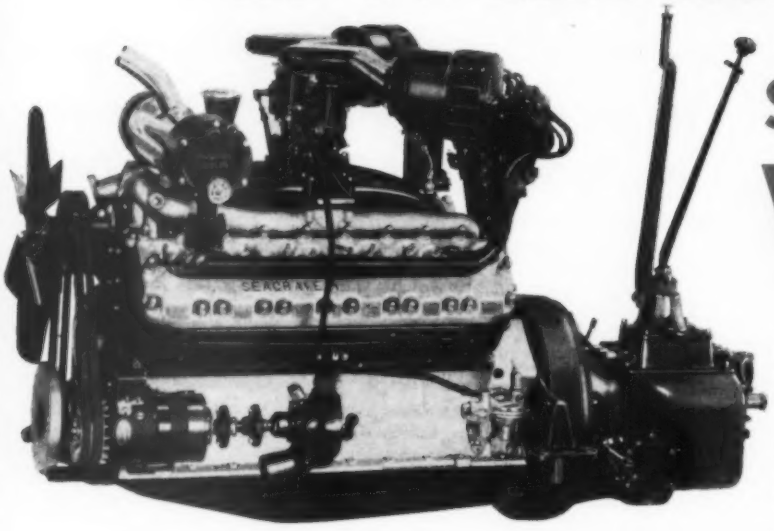
FMC *Original* HIGH-PRESSURE FOG FIRE FIGHTER

CAN BE MOUNTED ON MOST STANDARD TRUCK CHASSIS

FOOD MACHINERY CORPORATION

BUILDERS OF BEAN HIGH-PRESSURE PUMPS FOR OVER 60 YEARS

★ THE STURDY HEART OF A SEAGRAVE ★



SEAGRAVE V-12

Efficient, dependable, powerful . . . three words that most aptly describe the performance of the precision built Seagrave V-12 Motor.

The Seagrave V-12 is designed and built especially for Seagrave Apparatus . . . for use in fire service and for no other purpose.

Look at the record of Seagrave V-12 Motors. In every test they outperform and outclass any other type of motor built for fire service.

The Seagrave V-12 is compact and rigid and provides a smooth, streamlike flow of abundant power.

This motor and other exclusive Seagrave features are what make Seagrave "The Greatest Name in Fire Apparatus."

Seagrave

THE SEAGRAVE CORPORATION
COLUMBUS, OHIO

BICKLE-SEAGRAVE, LTD.
WOODSTOCK, ONT.

THE GREATEST NAME IN FIRE APPARATUS

BOSTON WOVEN HOSE
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AND RUBBER COMPANY
Merry Christmas

Rockwood Type B 500 GPM in action at the New Haven Fire Department's Technical Training Grounds.

New High Capacity

WaterFOG Nozzle Speeds Control Of Class A Fires

An Original Rockwood Development to Meet U. S. Navy Requirements

WaterFOG was developed primarily for flammable liquid fires, but municipal fire departments' experience has proved its success on class A fires.

Rockwood's new Type B 500 GMP WaterFOG Nozzle, developed for the U. S. Navy and proved in battle action, is designed for use on deluge guns, ladder pipes, etc. Supplementing the Type SG-40 WaterFOG Nozzle for regular hose lines, it allows fire fighters to use WaterFOG to attack Class A fires from any angle . . . in buildings, lumber yards, basement areas, etc.

Rockwood WaterFOG Knocks Down Class A Fires Faster

Reports from fire departments confirm the advantages of Rockwood WaterFOG in extinguishing Class A fires. The fog pattern with its greater heat-absorbing area lowers the temperature at a faster rate than a straight stream . . . protects men and equipment . . . permits closer approach to the fire . . . reduces amount of water required for extinguishment . . . lessens water damage.

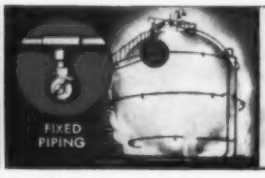
For additional data on the new Rockwood Type B 500 GPM WaterFOG Nozzle, write for Bulletin 500. Natural color movies (16 mm.) showing tests of Rockwood WaterFOG are available to city officials and business executives.

ROCKWOOD SPRINKLER COMPANY
54 Harlow Street, Worcester 5, Mass.

Specialists in Fire Protection Engineering, Equipment and Installation since 1907

Water Engineered by Rockwood Cools, Confines, Smothers Class "A" and Oil Fires

ROCKWOOD Water FOG



"It's the First Real Fire Engine Since the Steamer!"

THE METROPOLITAN — 1250 G. P. M. CAPACITY

AMERICAN-LAFRANCE

Leadership

Provides the Fire Service with these new Cab-ahead-of-engine models to meet the modern needs of the fire service. A maximum of UTILITY... VISIBILITY... and MANEUVERABILITY and ACCESSIBILITY are features of this post-war design.

Write for detailed information . . . it is free and no obligation.

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ELMIRA, NEW YORK, U. S. A.
LAFRANCE FIRE ENGINE AND FOAMITE LIMITED
TORONTO 9, ONTARIO, CANADA

THE WORLD'S FINEST
1250 GALLON PUMPING ENGINE
also available in all standard
N.B.F.U. capacities

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E & J equipped First Aid Co. of The Baldwin Fire Dept.

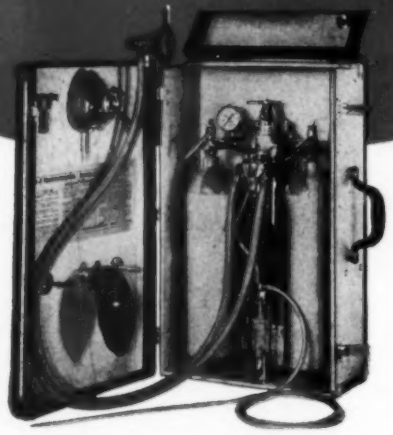
with the **E & J RESUSCITATOR INHALATOR and ASPIRATOR**

FIRST CHOICE IN FIRST AID

Six years ago, the progressive Baldwin, N. Y., Fire Department purchased their first E & J Resuscitator, Inhalator and Aspirator. After these many years of success with their first machine, they have now added another unit—the latest dual E & J Resuscitator, which can be used to treat two persons simultaneously.

That this efficient and modernly equipped rescue company depends on E & J equipment is the soundest kind of evidence of the built-in dependability of these essential life-saving units.

That the E & J is so widely used by Hospitals, Industrial Plants and Fire Departments the country over is significant!



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Pioneers and Specialists in Mechanical Artificial Respiration

FIRE APPLIANCE COMPANY

1849 SOUTH FIRST STREET ☆ P. O. BOX 849 ☆ SAN JOSE, CALIFORNIA

December, 1945

TO ALL PERSONS INTERESTED

IN FIRE PROTECTION:

Some of the most potent fire fighting equipment and materials ever developed are soon to be made available for your use. Though not all the equipment may be entirely new to you, its effectiveness has been so increased during the war that you may find it little short of revolutionary.

The experience Fire Appliance Company had gained in the manufacture of spray nozzles was put to work by the Army and Navy. For the Army and Army Air Forces we built Aqua-Gas nozzles. For the Navy's Bureau of Ships program we made all-purpose nozzles, many thousands of which have been used throughout the world.

New Aqua-Gas nozzle outperforms wartime model

Two years of intensive research, in cooperation with the Bureau of Aeronautics of the U.S. Navy, resulted in the Aqua-Foam crash truck. Over one hundred of these trucks are now being built for use in Navy Air Stations here at home and overseas.

Extinguishes gasoline fires in minutes!

These truly all-purpose fire trucks will be available for civilian fire department use in fighting gasoline and other inflammable liquid fires - as well as structural fires. The most advanced equipment and methods used in winning our war against fire will be fighting to save the property in your care.

Aqua-Foam contains the essential fire-resistant ingredients for smothering most burning liquids. It has been furnished in large quantities to the Navy Bureau of Aeronautics, as well as to the Army, for fighting crash fires. The foam applicators - Aqua-Foam nozzles - have been installed to improve the performance of Navy high pressure fog trucks, as well as crash fire trucks used by the Bureau of Aeronautics.

It's Aqua-Foam

Foam nozzles fit Aqua-Gas nozzles. One nozzle kit fits all types of fires.

Through Fire Appliance Company, all the tools you will need to control ANY type of fire in your community will soon be yours, in compact units which will complement - not render obsolete - your existing investment in fire fighting equipment.

Saves property—costs less!

Yours for better fire control,

Duncan F. Thurst

Aqua-Gas NOZZLES · APPLICATORS · AND SYSTEMS **Aqua-Foam**

We shall appreciate your mentioning FIRE ENGINEERING *when writing advertisers*

It slams the door on fire!

WHEN fire breaks out in a room housing flammable liquids or electrical equipment, the Kidde fire-extinguishing system works at top speed . . . and efficiency . . . whether the room is open or closed.

But often, the safety of nearby workers — or the protection of adjacent equipment — calls for a still further precaution — *complete isolation* of the room itself.

Kidde equipment can do that job too!

Pressure of the same carbon dioxide that smothers the flames actuates trips that allow fire doors and windows to close. Pressure-operated switches turn off ventilating fans . . . shut down machinery. When protected spaces are occupied time delay mechanisms are provided to permit exit from the space before extinguishing takes place.

Meanwhile the carbon dioxide gas, penetrating every corner of the room, kills the blaze in a matter of seconds.

There may be a room in your plant that calls for this combination of fast fire-fighting and automatic isolation. Or other fire hazards that can best be protected by Kidde portables, wheeled units, local application systems. Ask a Kidde representative to recommend the *right* protection for each danger area in the accompanying list.

* * *

KIDDE KILLS TOUGH FIRES *in Process Rooms, Ovens, Spreaders, Motors, Storage Rooms, Mixers, Coaters, Transformers, Dip Tanks, Agitators, Washing Trays, and Control Panels.*

Walter Kidde & Company, Inc., 1233 Main Street, Belleville 9, New Jersey

Kidde

The word "Kidde" and the Kidde seal are trade-marks of Walter Kidde & Company, Inc.

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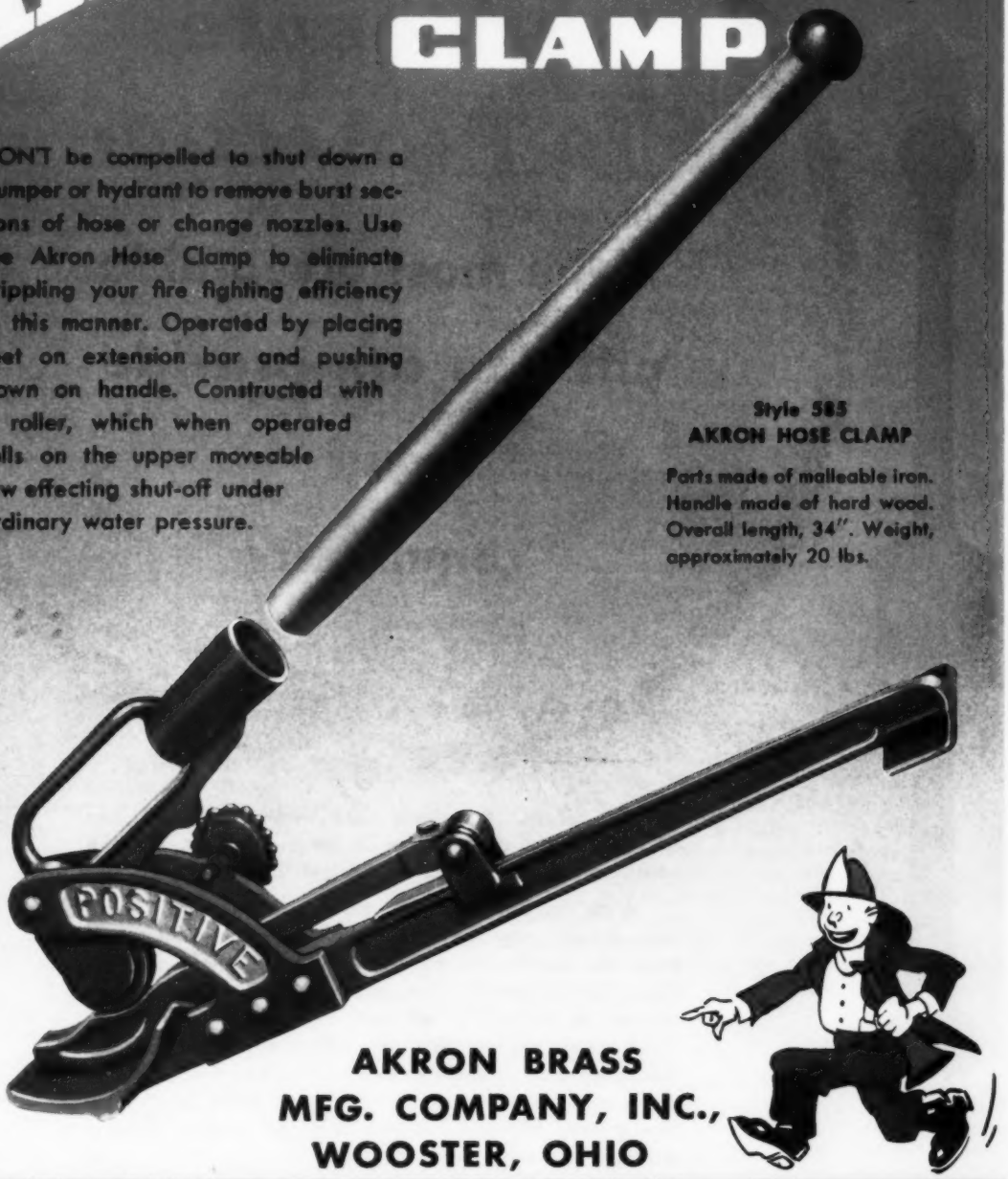
AKRON HOSE CLAMP

DON'T be compelled to shut down a pumper or hydrant to remove burst sections of hose or change nozzles. Use the Akron Hose Clamp to eliminate crippling your fire fighting efficiency in this manner. Operated by placing feet on extension bar and pushing down on handle. Constructed with a roller, which when operated rolls on the upper moveable jaw effecting shut-off under ordinary water pressure.

Style 585
AKRON HOSE CLAMP

Parts made of malleable iron. Handle made of hard wood. Overall length, 34". Weight, approximately 20 lbs.



AKRON BRASS MFG. COMPANY, INC., WOOSTER, OHIO

AKRON BRASS
FIRE FIGHTING EQUIPMENT

Adequate Fire Protection

is the most acceptable gift you can provide your community

Three-Fold Fire Alarm Box on Type U1000-6 Pedestal

THE safety, happiness and well-being of any community depends, in a great measure, on the adequacy of its protection against fire hazards.

With the hope that the joys of the coming Christmas season may be unimpaired and unusually free from the destructive consequences of fire out of control, The Gamewell Company takes this occasion to extend its thanks to all Fire Fighters for the confidence and appreciation so universally extended to the Gamewell Signaling System — the first line of defense against fire — and to wish each and every one a very Merry Christmas and the utmost success during the New Year.

THE GAMEWELL COMPANY
NEWTON UPPER FALLS, MASSACHUSETTS

FIRE
ENGINEERING

DECEMBER, 1945 VOL. 98, NO. 12

With the Editor

More About Melamine

In the October issue of FIRE ENGINEERING we told about experiments, conducted by members of the staff of a New England university and reported before a meeting of the New Hampshire Fire Chiefs Association, with a substance used in the manufacture of plastics, called melamine, and pointed out how, if all that the scientists claimed were true, the toxic qualities of this substance, when subject to heat, might prove lethal to citizens and firemen alike.

As might be expected, the account caused widespread interest, and apprehension, even among persons high in the fire service as well as manufacturers of plastics who, if accounts were true, suddenly found themselves faced with the alarming fact that they were unwittingly using a dangerous material in their pastic products. The repercussions went further — they were heard from manufacturers of household and other articles in which plastics of one kind or another were incorporated.

Since the first tests were reported to the New Hampshire Fire Chiefs Association, a well qualified independent laboratory has made extended tests on melamine, and the results thereof indicate that the proportion of potassium cyanide gas generated by the burning melamine is considerably less than originally reported. In fact, the percentage of cyanide gas in the atmosphere was far below the proportion that could be safely tolerated by human being, or even rats. It will be recalled that the demonstration before the New Hampshire Chiefs included the asphyxiation of a caged rat by the products of combustion of melamine.

It is now believed that the rat in this experiment died from carbon monoxide, rather than from cyanide, poisoning. As is generally known, combustion of carbonaceous materials in the absence of sufficient oxygen (supplied by the air in this particular case) generates carbon monoxide.

A. C. Hudson, Secretary, New Hampshire Board of Underwriters, who was active in ferreting out the story of melamine, was contacted relative to the authenticity of the New Hampshire tests. His telegraphic comment is: "University scientists were misquoted on relative degree of toxicity of gases developed from melamine at Nashua meeting."

There the matter rests. Until all the facts are forthcoming we suggest that neither the fire service nor manufacturers lose any further sleep over the matter.

Post-War Headaches For the Fireman

Early in November, 2700 A. F. of L. machinists of the Yale & Towne Manufacturing Company, Stamford, Conn., struck and threw the usual picket line around the big plant covering over thirty acres of ground.

The strike made the nation's headlines when pickets refused to allow the company president to enter the plant and later, when all factory maintenance men were reported called off the job, shutting down the heat, power and the plant's sprinklers and other water supplies.

According to reports, when "Michael Droter, a member of the Stamford Fire Department, who said he was acting on orders of Fire Chief Victor H. Veit, sought to cross the line to check fire protection equipment within the plant he, too, was denied admission."

Reports state further: "A spokesman for the union told the firemen that the strikers themselves would protect the plant, but that the city fire department would be permitted to cross the line in the event of fire."

It looks to us as if this is another headache for the fire service, caught unwillingly in the maelstrom of post-war labor-management unrest.

We hold no brief for either party to a situation like this but we do decry circumstances that so unnecessarily jeopardize the very objectives which one side or the other seeks and which, even worse, threaten a city with the loss of its largest industry and the livelihood of thousands of its citizens. Still worse, from our viewpoint, we deplore setting up uncalled-for hazards for firemen who already have more than enough to face.

We hope the reports are untrue, and that plant safety personnel was permitted to continue to work and that labor, as well as management, encouraged the fire department to intensify its efforts to protect the plant against fire.

Fire is no respecter of persons, property, policies or politics — and fire never goes on strike!

Fred Shepperd

The German Fire Engine Industry As I Saw It

By CARLISLE F. SMITH*

THE story of the fire engine industry in Germany is one of general destruction and ruin, following the pattern of all industry in that country. In terms of importance and productive capacity, the Magirus Company in Ulm on the Danube, was by a considerable margin the producer of first importance, with the Carl Metz Company of Karlsruhe second. Aside from these two producers there were three or four others of comparatively small size.

Compared to the stringency of Nazi control of the fire engine industry, the restricting effect of our War Production Board limitation order L-43 was a mild document indeed. Following the general form of the straight jacket in which all German industry was placed by the Nazis, the fire engine industry was presented with a set of instructions under the signature of der Fuerer and officially bearing the stamp of the Storm Troopers, which not only limited the materials they could use, but very definitely restricted their design. Under German war production control, a standard fire pump was designed, which all German manufacturers were required to build. During most of the war period, the famous Magirus and Metz all steel aerial ladders were permitted to continue in their regular designs, although instructions to the industry from the Nazi government actually indicated those two specific designs just to be consistent. The final blow came during September, 1944, when all production of fire engines for either military or civilian use was ordered stopped by the government, so that any possible production from fire engine producers could be concentrated upon military items only.

The Magirus Company in Ulm did have two rather large plants, the older plant being situated near the bridge and on the street that the American Army passed following the Wermacht to their final defeat in Austria. This plant was in peacetime devoted to the manufacture of municipal fire engines and the all-steel aerial. The destruction at this plant from bombing was officially listed as 50%. However, in terms of any possible productive capacity from the plant, it would appear that if they could produce 10% of their normal peace time volume they would be fortunate indeed. Some of their buildings were completely destroyed by bombing and by the resultant fire, so that either nothing remained but a pile of rubble or one or more walls which will ultimately have to be destroyed before any re-building can commence. Other buildings in the plant were minus roofs or windows. Immediately after the German surrender, the Magirus management, approved by the Allied military government, had begun to patch up their remaining facilities, so that industrial activity of some sort could commence. In one building, which was minus a roof, twenty-five or thirty semi-finished aerial mechanisms were observed stored as they had been taken out of production due to the Nazi order eliminating active fire engine production. The London England Fire Department was indeed happy to learn of the existence of these mechanisms, inasmuch as a high percentage of the steel aerial ladders in London are Magirus, and the availability of repair parts is, of course, very important to the London Fire Department.

In the second Magirus plant, which was located in a suburb known as Söflingen, could be seen a few remains of the special Airfoam type of fire engine manufactured by Magirus for the Wermacht, the nature of which is described later. This plant was about 95% destroyed by bombing. In fact, most of it lay flat. The writer observed in one building, housing punch presses, that masonry walls had been constructed from the floor to the ceiling between each punch press, so that the effect of a bomb explosion might at least spare the productive capacity of one press, even though its neighbor might be destroyed. The writer was told that this particular building had been destroyed three times and that the construction of the masonry "splinter wall" was a frantic effort to save the productive capacity of all possible equipment.

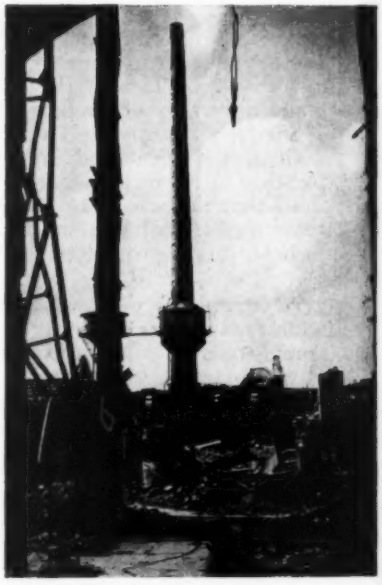


Fig. 2. Carl Metz Plant at Karlsruhe

The military type of fire engine manufactured by Magirus is illustrated in Figure 1. This truck appeared to be approximately a 5-ton capacity, 4 x 4, equipped to carry a normal operating crew and equipped also with water and airfoam liquid tanks. The pump was mounted at the rear of the frame, which is of course standard practice in Germany, and was fitted with valved water and airfoam liquid intakes, which in turn delivered through hose and reels to Total Komet airfoam pipes of the asperating type such as are used in this country and such as were used in considerable number by our military forces, particularly the United States Navy. This particular truck was used by the Wermacht for rescue work after crash landings and was also used for the general fire-fighting requirements of the Army.

There was also evidence of manufacture of tank trucks used to carry water

Fig. 1. Magirus Fire Engine for the Wehrmacht. This Is a Magirus Photograph Given to the Writer by Richard Thomann

*Executive Engineer, Ward LaFrance Truck Division, Great American Industries, Inc.

ly and equipped with the usual reel-ounted water pump.

The question is often asked as to Ger-an interest in water fog or in high ressure pumping in the fire service. he writer found no evidence whatever equipment or information from Ger-an engineers consulted, that they were terested at all in either fog or high ressure. In fact, their normal pump ting pressure is 114 pounds per square ch and they consider 180 pounds per uare inch as high pressure. The use Airfoam, on the other hand, is uni-rsal throughout German industry as ell as throughout the Army.

Effect of War on Production

In discussing the effect of the war on their productive capacities the riter was advised by Magirus that the fect first felt was due to the bombing transportation facilities and that ap-roximately one year before the German rrender, the effect of this type of mbing was felt. This became pro-ressively worse during the last year of e war when transportation was mbed out more and more and, fur-er, the actual bombing destruction at e plant became increasingly rapid, so at about two months prior to the end the war they were forced to discon-ue operations completely. There was e observation which appeared unusual those of us who had to worry about merican production during the war d that was the rather heavy inventory standard steel shapes that appeared be plentiful in all German factories. The Magirus office building had suf-red from the bombing to the extent at all engineering records had been moved to the basement of an army rracks across the street and much of eir engineering department material as still just piled up awaiting a re-rting before any particular drawings other engineering information could cataloged and found.

The Carl Metz plant in Karlsruhe as completely destroyed, so much so at there was no attempt to guard the roperty, as there was nothing to loot. he one remaining land mark was their imney and, peculiarly, it stood alone the midst of the ruins of their power ant, as shown in Figure 2. The Carl etz Company manufactured its own aerial ladders complete with the operating mechanism and also manufactured their own fire pumps. However, the chassis for all types of fire-fighting vehicles were manufactured for them by Mercedes Benz. One of the principal producers of fire pumps for the fire engine manufacturers was Amag Hilpert Pegnitzhutte A.G., which concern manufactured a general line of pumps for requirements other than fire service. Unfortunately, for this institution, their plant manufacturing pumps for the fire service was situated across the street from the Nuremburg rail yard and this plant was totally and completely destroyed. Nothing remained but piles of brick and rubble which buried the machinery.

Fig. 4. Little Remains Standing of the Carl Metz Plant at Karlsruhe

Pumping Capacities Low

On the subject of the fire fighting service in Germany, it will be interesting to the American fire-fighting service to note that the largest pumping capacity of any standard German fire engine is 660 U.S. gallons per minute at 114 pounds per square inch, which low capacity is due in part to the size of their water mains and due in part to the fact that there is no wooden construction in Germany. Practically all their peacetime fire pumps were two-stage, series connected, and were not equipped with changeover valves, so that they could be operated at a higher capacity in parallel. Prior to the war the material generally used was aluminum; aluminum for the impellers, pumps, bodies, suction connections and discharge gates.

Among the smaller manufacturers assembling fire engines was a Hermann Koebe, who operated a small plant near Berlin and who, according to the information given the writer, fared quite well in obtaining government orders for fire engines due to his being well connected within the Nazi party. This plant at present is of course in Russian occupied territory.

It was of unusual personal interest to the writer to meet in the Magirus main plant a Mr. Richard Thomann who had resided in Indianapolis, Indiana, for some ten years at the time that Magirus were attempting to introduce their all steel aerial ladder in the United States. Mr. Thomann particularly asked the writer to convey his regards to Fred Shepperd of FIRE ENGINEERING. Thomann's understanding of Americans and his excellent command of our language were particularly helpful in obtaining information with respect to municipal fire-fighting practices in Germany as compared with that in the United States. Mr. Thomann advised that the German government had, of course, propagandized their people to the effect that the Americans would subject them to all sorts of brutal treatment, which he realized was untrue. He further described the fear that the German people had of the Russians and that when American military equipment began rolling into Ulm, bearing the familiar white star, many of the natives were fearful that it was the Russians who were going to occupy Ulm instead of Americans. He of course was able to explain to the German people that the white star on military vehicles was U. S. Army insignia and not Russian. The bridge across the Danube adjacent to the Magirus main plant was perhaps the last bridge to be blown by the Nazis in their frantic retreat and, according

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Fig. 3. Partially Assembled Magirus Wehrmacht Fire Engine in Bombed Plant at Soflingen (Ulm Suburb)

Review of State Firemen's Laws

By LEO T. PARKER
Attorney-at-Law, Cincinnati, Ohio

A REVIEW of 1944 higher court decisions discloses that a majority of legal controversies involving municipal firemen necessitates interpretation of state statutes. Under certain circumstances the courts strictly interpret laws of this nature. Under other circumstances they broadly interpret them, and under still other conditions such laws are ignored. In fact, the particular testimony and evidence presented during a trial affects, to a great degree, the court's interpretation and final decision of the legal rights of municipal firemen under state laws.

An interesting phase of the modern law is that the higher courts have agreed that it is impossible to adopt a general rule by which may be determined the legal rights and liabilities of municipal firemen who base their suits on state statutes. Generally speaking, the only true test in each particular case is proper and logical interpretation of such state statutes which directly affect the controversy at hand.

In view of this establishing law, it is advisable and advantageous for readers to save the hereinafter higher court citations for future reference. In the future months or years knowledge of the law explained in these pages may prove the basis of winning a suit not contemplated at this time.

Soldier Credited for Military Service

Considerable discussion has arisen from time to time over the legal question: Is a state law valid which authorizes future credit for military service to municipal firemen? Also, in event such law is valid must the fireman apply for reinstatement in the municipal fire department immediately after being discharged from the army?

For example, in Montgomery v. Minneapolis Fire Department Relief Ass'n, 15 N. W. (2d) 122, reported August, 1944, a state law was litigated which provides that members of municipal fire departments shall, after they have arrived at the age of 50 years, or more, and served at least 20 years be entitled to a basic pension of not less than $50.00 per month. Another section of this law provides that any fireman who has served in the military forces of the United States in any war, and resumed active duty in the fire department, shall be allowed credit on the 20 years for the time or period he served in the military service.

From August 4, 1912, until March 1, 1917, a person was regularly employed as one of the firemen of the Minneapolis Fire Department. He severed his connection with it on March 1, 1917, and shortly thereafter, on May 29, entered army service in World War I, from which he was honorably discharged April 21, 1919. In other words, he served in the army for approximately twenty-three months. For a period of some nine years after his discharge he was engaged in private employment. From January 22, 1930, and until August 13, 1943, he was constantly employed by the fire department as a regular fireman. During his entire employment there, both before and after his army service, he was a regular duespaying member in good standing of the Relief Association. He is now past 53 years of age.

The fireman applied for a pension, but his application was denied on the grounds that although the law *may be* valid he could not expect to be credited with twenty-three months he had served in the army because he had delayed nine years in rejoining the municipal fire department *after he was discharged* from the army.

The fireman appealed to the higher court, which held this law valid and interpreted it to mean that the fireman *must* be given credit for the period he had served in the army, irrespective of the fact that he had delayed rejoining the municipal fire department for nine years after he was discharged from the army. This court said:

"The statutory language upon which the case hinges appears to be perfectly plain. There is no ambiguity. Therefore, there is no room for construction, since 'construction lies wholly in the domain of ambiguity'. It is an expression of public policy by the lawmakers. We are in duty bound to give full effect to the legislative purpose."

The fact that a multitude of former municipal firemen now serve in the military service makes it advisable to explain certain higher court holdings on the Soldiers' and Sailors' Civil Relief Act.

The Soldiers' and Sailors' Civil Relief Act was enacted by Congress to stay or delay suits which may disadvantageously affect members in the United States military service. The Act is enacted to prevent worry and mental disturbances of persons in the various branches of the military service, whose interests are likely to be unfairly affected by reason of their inability to appear in court in defense of suits filed against them.

Contrary to the belief of a majority this law does not positively prevent institution and final decisions in suits. But the courts *merely* are authorized to stay suits and litigations when *in the opinion of the court* the legal rights of the servicemen will be "unduly and unfairly" affected. In other words, the Act authorized "stays" of all suits against military members *if* in the opinion of the court the ability of the serviceman to serve his country will be materially affected by reason of final decision in the suit at this time.

Partnership Benefits Under Relief Act Not Legal

Considerable discussion has arisen from time to time over the legal question: May a partnership take benefits under the Soldiers' and Sailors' Civil Relief Act upon proof that one partner is in military service? The answer is no, but the serviceman may prove that his own particular interests are jeopardized and the court will protect *his* interests. However, rights of bona fide purchasers for value under such judgments are protected by law. See Mims Brothers v. N. A. James, Inc., 174 S. W. (2d) 276, where it was shown that a suit was filed against a partnership to recover payment for merchandise. One member of the partnership was in military service when the suit was filed. The lower court rendered a verdict against the partnership for the amount of the debt. Soon afterward the members of the partnership appealed to the higher court asking it to reverse the verdict on the ground that one of its members was in military service. The higher court refused to do so.

One section of the Soldiers' and Sailors' Civil Relief Act specifies that no suit may be completed if, in the opinion of the court, an undue hardship may result to the dependents of a person in military service. This is an important section of the law.

In view of this portion of the law the higher courts have in many instances "stayed" suits filed against dependents of persons in the military service.

On the other hand, there are many records of higher court decisions which have refused to stay suits filed against servicemen. See Taff, 50 N. E. (2d) 203; Kavan, 13 So. (2d) 532; and Stay, 28 Atl. (2d) 653.

Fair Labor Standards Act

Modern higher courts hold that the benefits of the Fair Labor Standards Act are extended to such employes as maintenance workers, watchmen, clerks, stenographers, messengers, all of whom must be considered as engaged in processes or occupations "necessary to the production" of the goods sold in interstate commerce.

Now, a higher court had held firemen within the scope of this law.

For example, in Wantock v. Armour and Company, 140 Fed. (2d) 356, reported May, 1944, it was shown that two employes sued their employer to recover overtime compensation and liquidated damages. The terms of their employment were unusual and out of the ordinary in that, as auxiliary firemen, they were employed during one period on a 48-hour work shift with the ensuing 48 hours off and during another period there were alternating stretches of 24 hours on and 24 hours off.

During the work periods, the employes performed active services from 8 A.M. until 5 P.M., with a half hour for lunch. At 5 P.M., their active labor ceased, and they were free to do as they pleased until 8 o'clock the next morning, subject, however, to the restriction that they had to remain in the firehouse so as to be subject to call in case of fire. They devoted this time from 5 P.M. to 8 A.M. to such recreations or sleeping or eating as their natures and desires dictated. They responded to fire calls if any were made, which was seldom.

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ABANDONED GRAIN ELEVATOR GIVES CHICAGO A HOT FIRE

Thirty-Five Fire Companies Prevent Extension To Adjacent Property in Brief But Tough Battle

A Staff Report

FIRE in an old abandoned grain elevator, located at 24th Street and Archer Avenue, Chicago, created heat so intense that firemen were unable to approach closer than within half a block of it. The wooden structure, nearly a city block long and seven stories high, said to be the oldest grain elevator in Chicago, burned like a torch despite the efforts of thirty-five of the city's fire companies summoned on a five-eleven alarm and two special calls, as well as the fireboat Fred Busse.

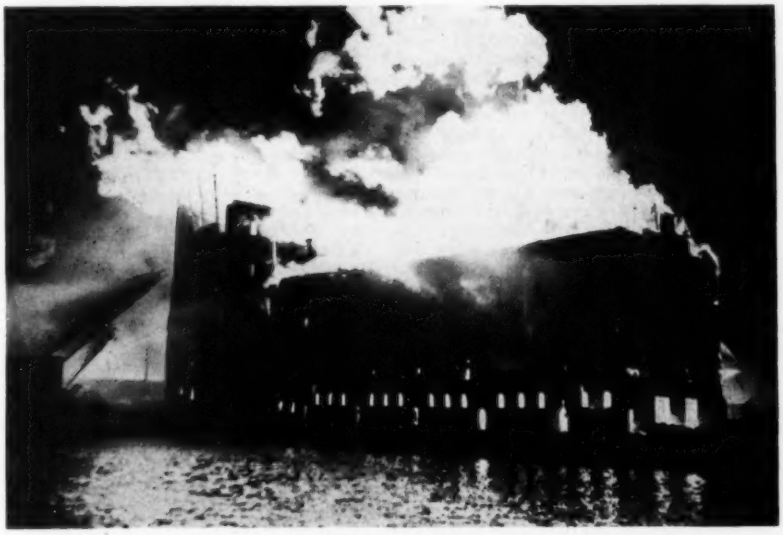
At one time, the Busse fought her way within fifty feet of the building but was forced to withdraw when the northwest corner of the huge structure collapsed and the remainder of the wall sagged alarmingly and threatened to crash into the river.

Many old time Chicago firemen who have battled elevator blazes affirm that the heat generated by this fire far exceeded that of any of its predecessors. The flames, shooting several hundred feet into the air, cast a glow on the sky visible as far north as Waukegan, thirty miles away. A telephone pole on Wallace Street south of Archer Avenue, a block away, caught fire from the radiated heat. Window panes in the nearby buildings were too hot to touch. Firemen, unable to bring heavy streams to bear upon the flaming structure, devoted most of their efforts to protecting exposures.

Because of the intense heat and clouds of sparks and flaming embers, firemen were forced to concentrate on wetting down roofs of nearby factories, as well as spraying their own trucks and fourteen outdoor chemical tanks of a chemical corporation to keep the fire from spreading. Despite their efforts, however, fires broke out at the White Motor Company, 2401 Archer Avenue; the Hansell-Elcock Iron Works, 485 West 23rd. Place and the Vierling Steel Works, 353 West 23rd Place. In addition several light poles were ignited. All these fires were quickly extinguished.

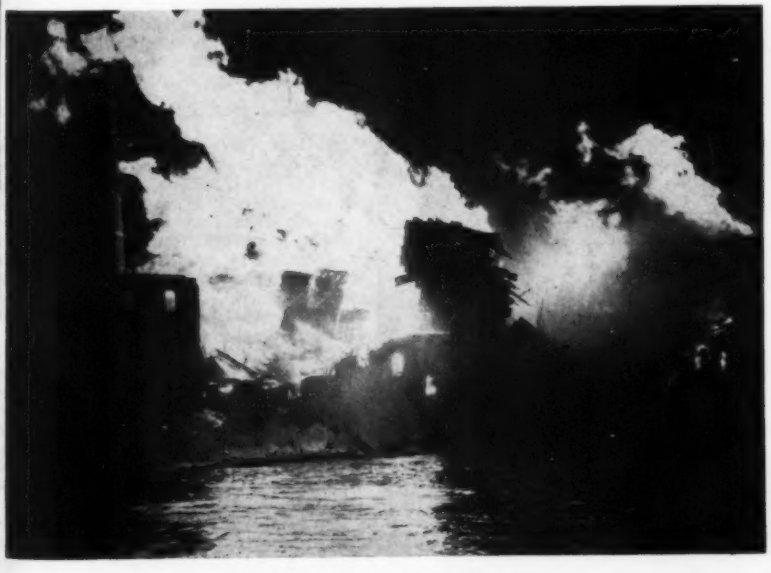
Casualties Light

Despite the magnitude of the fire-fighting operations, and the handicaps under which the men labored, accidents were few. Captain William J. Marrhies, 52, acting chief of the 9th Battalion, suffered a hip fracture when he stepped into a hole. He was taken to Mercy hospital. A few other firemen suffered minor injuries but remained on the job.



Fireboat Streams Fruitless on Flaming Elevator

Chicago's fireboat Fred Busse with other units of 5-11 response were unable to reach roaring fire with the heaviest of streams.



Huge Bonfire Visible Thirty Miles Away

One of Chicago's hottest fires levels an abandoned elevator, while firemen fight on wide front to cover exposures.

Structure Was Being Wrecked

The ancient elevator had been abandoned. It was formerly owned by the National Grain Company, and was purchased five months ago by John F. Cuneo, and was in process of being wrecked by the American Wrecking Company to make room for a new warehouse, when the fire occurred. Part of the roof had been removed. Cuneo estimates his loss at "probably less than $125,000."

The fire was discovered about 8:15 P.M. by a guard at the adjoining Cuneo printing plant. He turned in an alarm and before the first fire companies reached the scene it is reported flames had enveloped the upper part of the structure.

The glare in the sky, the movement of responding and locating fire companies and the reported broadcasts of news of the fire brought out a crowd of spectators and resulted in a flood of telephone calls to fire and police headquarters and the press. Fifteen squads of police were dispatched to the fire with 100 patrolmen on foot from nearby police districts. They struggled to keep the milling crowds several blocks away while the fire was at its height.

FOUR KILLED IN EXPLOSION AND FIRE AT A. & P. WAREHOUSE

Unexplained Blast Followed by Fire Injures Twenty-Four, Wrecks Building

A Staff Report

FOUR men were killed and twenty-four others injured, one critically, in an unexplained explosion which blasted out the rear wall of the Great Atlantic and Pacific Tea Co. warehouse at Frelinghauysen avenue and Queen street, Newark, N. J., November 26.

The blast and subsequent three-alarm fire, damaged an area of 10,000 square feet inside the three story concrete, brick and steel warehouse. Two departments, the meat-storage and the banana-storage departments at the east end of the structure on the ground floor blew up. The two departments, occupying the 10,000 square feet of the 150,000 square feet of floor space in the building were completely wrecked, the concrete wall between them being completely demolished and the whole area filled with fallen beams and partitions, wrecked stairways, fragments of machinery and bits of broken glass. A brick and concrete wall at the rear of the warehouse, facing the yards of the Pennsylvania Railroad, crumpled like so much cardboard. Police reported finding shoes, shorts and other apparel in the debris. One of the dead men was blown through the wall onto the railroad tracks, according to witnesses.

The explosion, the source of which is being investigated by a number of City departments, occurred at about 3:45 P. M. and was heard a mile and a half away. Ammonia fumes hung heavily over the warehouse for hours afterward and firemen and police leaned to the belief that an ammonia tank may have exploded either in the banana refrigeration room, or the meat room.

Every window on the east side of the building was blown out, as were the windows of Blanchard Brothers leather factory next door. Peculiarly enough, however, so far as could be observed, not an electric light bulb in the warehouse was broken.

About 100 in Building

Approximately 100 employees were in the building at the time of the explosion. Ten of the injured, all former servicemen, were being taught how to slice and sell meat in a class conducted by Howard Schwabl, 38, one of those killed. It was one of the meat class students, James L. Herrington, who was blown through the wall onto the railroad right-of-way. The other two killed were Joseph P. Fagan, 51, meat supervisor and George Dempsey, 36, assistant warehouse manager. The critically injured man, William Talley, and four less injured men were taken to St. Barnabas Hospital; thirteen of the injured were taken by ambulance, police patrol wagons and private automobiles to Beth Israel Hospital, and six, to St. James Hospital, in addition to the five removed to St. Barnabas.

The room in which the class was being taught, and which was wrecked, was thirty feet long and was located in the rear of the warehouse. By another freak of the explosion, the coats and hats of the class, hung neatly in an open locker in a corner of the room, were undisturbed by the blast, though wreckage surrounded the locker. Two men who were in the locker room about ten feet from the explosion, preparing to go to work on the 4:00 P. M. shift, escaped with injuries. Another injured man, W. Clay, company inspector, who narrowly escaped, was talking with two of those who were killed when the explosion knocked them all off their feet. He has no recollection of how he escaped.

Fire Department Heads Rescue

The city's emergency and disaster forces were quick to mobilize at the scene. Responding to the three alarms there were eighteen pieces of fire apparatus, including five engine companies, five truck companies, one rescue and one searchlight company, under the direction of Fire Chief Charles Burne and Deputy Chiefs Gabriel and Week and Acting Battalion Chief Bartlett. One ladder truck was special called.

In addition to the fire forces, there were the city's seven police patrol cars and two emergency squad trucks, under Chief Philip Seabold, three city hospital ambulances and ten internees; four nurses from Presbyterian Hospital and three Red Cross ambulances from the Newark Chapter.

The fire, which followed the explosion, was not of serious proportions, although flames were reported forty feet in height at one time. These were quickly subdued by the fire department which devoted most of its efforts to rescuing the victims.

The most critically injured person identified as Talley, was trapped in the meat room under an iron grinder which, in turn, was weighed down by a meat case. For twenty minutes, Deputy Chief John Weeks (who is also the drillmaster of the department), aided by Captain Fritz Klingenberger of the Rescue Squad, Fireman Edward Bowes and a police emergency squad, labored with jacks and crowbars before he could be extricated. During the next fifteen minutes he was given stimulants' by Dr. John Pannullo, fire department surgeon.

Public Radio Broadcasts News

Within forty-five minutes after the blast, 300 relatives of warehous employees were milling about the Queen street gates, held in check by police. Crowds of curious spectators attracted to the scene by the noise and smoke of the explosion, and the subsequent public radio broadcasts of news of the disaster, taxed the efforts of police. Patrolmen rerouted traffic along busy Frelinghuysen avenue to facilitate passage of fire and police apparatus. Other police work at the scene was directed by Detective Albert Apgar and Fireman John Dolan of the Arson Squad, Lieutenant Thomas Birmingham and Detective William Sales of the Casualty Squad, Acting Captain James Bell of the Radio Division and Captain Peter Corbelly of the Emergency Squad.

At intervals following the initial blast, the radio stations of the area broadcast news of the emergency and it is reported that resultant heavy telephone inquiries almost swamped the telephone and fire

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Explosion and Fire Wreck A. & P. Warehouse

Body of one of six victims of blast lies on railroad right-of-way after being blown through rear wall of structure.

POSTWAR PROTECTION STRESSED BY FIRE PREVENTION WEEK

Nationwide Program Shows Marked Increase in Interest and Activity

NEW YORK CITY's Fire Prevention Week didn't pan out so well despite the promotional efforts of the New York Fire Department, Commissioner Patrick Walsh and Administrative Assistant Charles Wilson and their co-workers, who this year conducted one of the department's most energetic drives, using radio, news reels, exhibits, parades and the press.

There were forty-two more fires in the city during the week this year than last year and five more false alarms than the same week a year ago. The figures for the week were 612 fires and 228 false alarms. Of the fires, two were third alarms (on the same day) and two were second alarms.

Fire Prevention Day, October 9, was marred by a second alarm fire in a wholesale grocery in Brooklyn. The two third alarms on October 10 were for a hat and dye works and a carpet and rug establishment. On October 13 fire in lumber and building materials in Brooklyn necessitated two alarms.

Arlington, Mass.

In Arlington, the fire department under the direction of Chief Daniel B. Tierney, past president of the International Association and now its secretary-treasurer, waged a vigorous campaign for fire prevention, a feature of which was the annual inspection of the town's 8,000 homes for possible fire hazards.

Chief Tierney is reported to have been the first fire chief to institute inspection of homes for fire hazards and faulty household equipment and furnishing that would lead to trouble. This was in 1924, and up to Fire Prevention Week, Arlington had only one death from fire, that of a woman in 1944, who was killed by explosion that never has been explained satisfactorily.

During this year's Fire Prevention Week, the fire department was assisted in its household inspections by a large number of volunteers and, as in the past, fire department members gave their off-duty time to the enterprise.

Iowa

Reports would appear to give the State of Iowa the "All-America" crown for this year's Fire Prevention Week promotion, with the states of Illinois and Indiana running close seconds. Not only in extent, but in degree, the paid and volunteer forces of the "Corn" state under Fire Marshal Strohm once again set up records.

Illinois

Fire Marshal John Craig and a large staff of assistants, energized the state's fire forces in an effort to better the goals reached in previous years.

In the city of Aurora, the fire department, directed by Chief E. J. Ryan, staged an intensive Fire Prevention Week promotion. Aided by an enterprising press, Chief Ryan repeatedly spread the gospel of better fire prevention to all citizens during the week. In addition to local papers, movies, lectures, and mail propaganda were used. Home inspections were made, the department distributing 2,000 home inspection blanks. The grade schools came in for attention, both printed matter, lectures and movies being used to enlighten the pupils. A sound-truck toured the business and residential districts. Radio broadcast programs aided to sustain interest of the listeners.

"Altogether," says Chief Ryan, "we had a very busy week and we feel that a lot of permanent good was accomplished."

The Indiana Fire Chiefs Association (President Forest LaFraw working with the fire marshal's office, headed by Carter Bowser) and the state's insurance and rating bureau interests, sparkplugged by former fire marshal Clem Smith and state coordinator, Robert Hamm, combined to add still another successful chapter to its excellent record.

Fort Jackson, N. C.

Highlighting Fire Prevention Week activities in the area, was a parade in which the Fort Jackson Fire Department, Connie F. Finney, Chief, joined with the Columbia and nearby Air Base fire forces.

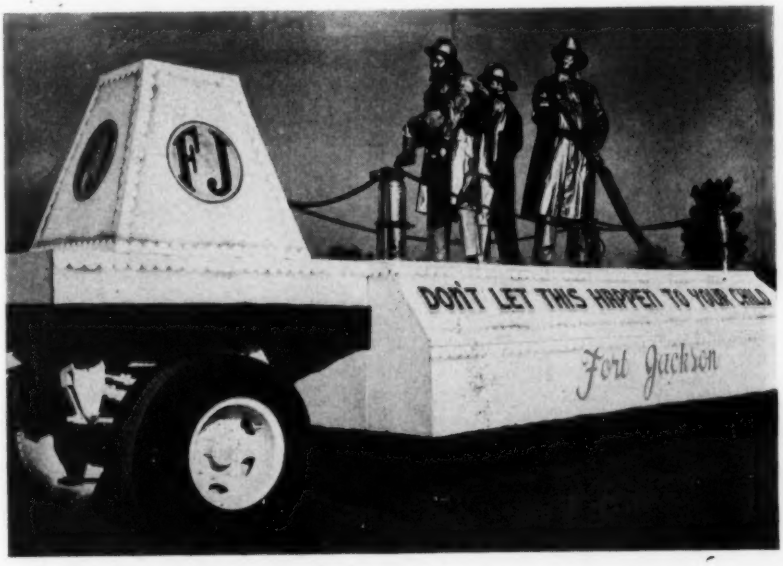
In the past, military establishments have not been as active in observance of Fire Prevention Week as have municipal and other authorities, but this year, the campaign staged by the Fort Jackson post was an impressive example of what can be done.

Following the parade, citizens were treated to an old-fashioned fire fighting demonstration at one of Columbia's busy street corners. This demonstration, by teams from the post brigade and Columbia departments, showed the "old" and the "new" way of doing it, even to utilization of horsedrawn apparatus vs. modern motorized equipment.

In addition, billboards, radio, the

PROTECT LIFE & PROPERTY
Do your part-Be Fire Conscious....Help us maintain our past Fire Record"
FIRE PREVENTION WEEK
OCTOBER 7 — 13

Fire Prevention Billboard Sponsored by Fort Jackson Fire Department; Connie A. Finney, Chief



Fire Prevention Float Displayed by Fort Jackson Fire Department

press and printed publicity were used to drive home the fire prevention message.

The Fort Jackson Fire Department under Chief Finney has itself shown an example of how fire prevention pays. The number of fires and calls has shown a steady drop since 1943.

Columbus, Ohio

A bright spot in fire prevention activities is the arson detection work done by the Fire Prevention Squad of the Columbus, Ohio, Fire Department under direction of Captain John Jordan in charge of the Fire Prevention Bureau. Information released through J. W. Huntington, manager of the Mill Mutuals' Ohio Department at Columbus, and Chairman of the Fire Prevention Committee of the local Chamber of Commerce, discloses an impressive number of arrests and convictions for arson which have been made during 1945 by the Fire Prevention Squad of the Columbus department, headed by Chief Edward P. Welch. In Columbus, Fire Prevention Week is "Fire Prevention Year," so far as arson detection and prosecution are concerned.

Outstanding Industrial Effort

Among the enterprising Fire Prevention Week drives by industrial fire departments was that of American Bosch Corporation, Springfield, Mass., whose chief is Allan J. Hodge. Chief Hodge writes:

"Here at American Bosch we have what we consider an outstanding record in fire prevention. Until the recent reduction in plant activity, there has been an average of six fires per month, mostly magnesium fires, with a total fire loss of less than $100 in four years. Contributing to this achievement are the following factors:

"The plant fire department consists of a chief, two deputy chiefs and a captain with fifteen men to each shift, all of whom have been trained at the Springfield Fire Department Drill School. The men are all employed in the factory and are paid extra for their fire duties. We have our own fire alarm system consisting of fifty-four non-interfering boxes with recorders in the chief's office and in the plant guard headquarters, in addition to the audible signals.

"During Fire Prevention Week, in an endeavor to keep all personnel fire conscious, we erected a display of our fire fighting equipment in the plant cafeteria. This excited much interest, and the week was highlighted by an inspection tour by the State Fire Marshal and fire chiefs of nearby communities."

Los Angeles Stages Fire Show

The Los Angeles Junior Chamber of Commerce and the Los Angeles Fire Department staged a dramatic episode in their annual Fire Prevention Week Program at the corner of Sunset and Vine Streets at 7:15 P. M. one evening during the week.

Smoke was released from the roof of a two-story building, following which fire companies from all directions converged on "the fire;" ladders were raised; hose stretched and the firemen went through their paces in a breath-taking demonstration of the department's latest fire fighting equipment.

A billboard 40 x 18 feet was unveiled atop the building, showing a day-by-day record of fires in Los Angeles for a two-week period prior to Fire Prevention Week.

In addition the fire department used lectures, mails, radio and motion pictures to further drive home the importance of fire prevention.—C. B. ASHLEY.

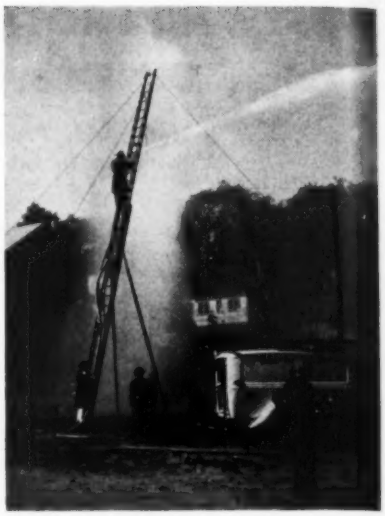
Camden, Maine, Stages Demonstration

During Fire Prevention Week, the Camden, Maine, Fire Department staged a public demonstration of its equipment, forty-two of its forty-seven members taking part.

High points of the exhibition were: Use of one 750 G.P.M. and one 250 G.P.M. pumpers, also hydrant streams, using deluge sets which delivered approximately 5,000 gallons per minute of water. In this demonstration an aerial ladder-pipe and three fog streams were operated from one ladder held in place with guy ropes. In the second exhibition, the auxiliary firemen demonstrated the use of life-saving equipment, portable fire escapes, life lines, etc.

For Act 3, a tar kettle, such as is used on road construction repair work was filled and ignited and the "boil over" fire extinguished with high velocity fog in a matter of a few seconds. The finale was a display of water fog fire fighting technique on large oil fires, built in 25-foot pits. Both large and small fog nozzles were used much after the methods employed by the Navy's Fire Fighter Schools.

Chief Allen F. Payson, of Camden, reports both public and firemen were most enthusiastic over the demonstrations.



Camden, Maine, Firemen Stage Stunt
Straight and fog nozzles used on guyed extension ladder in Fire Prevention Week demonstration.

Fire Prevention Week Notes

In Arkansas, the Arkansas State Fire Prevention Bureau, Little Rock, devoted an entire issue of its bulletin "Arkansas Fireman" to promoting Fire Prevention Week.

In South Charleston, S. C., Carbide and Chemicals Corporation, whose enterprising director of fire prevention is James J. Duggan, featured the week in its 86-page magazine "Carbide News." The cover and ten pages were given over to a graphic message which was circulated to the 11,000 employees of the corporation's plants.

In Westchester County, N. Y., the Fire Chiefs' Emergency Plan waged a fire prevention campaign among all the county's forty-seven communities and fire districts.

Fire Prevention Week Inspection Tour of Bosch Plant
Left to right: Allan J. Hodge, American Bosch Fire Chief; L. McGough, Holyoke Fire Department; District Chief W. F. Ward, Springfield; Captain W. G. Clune, Springfield; Chief J. R. Rohan, Holyoke; E. H. Whittemore, State Fire Marshal; Chief Ernest Laflamme, Chicopee; Captain M. Burke, Holyoke, and Chief R. L. Breck, Longmeadow.

Acknowledgment

In describing the fire at Battle Creek, Mich., on page 832 of the November issue of FIRE ENGINEERING, we neglected to credit Central Photo for the four views of the fire. Acknowledgment is hereby given.

NEW YORK F. D. ADDS A FIRE, GAS AND CHEMICAL LABORATORY

Special Mobile Unit Manned by Technicians Makes Tests on Fire Ground

ANOTHER step forward in the application of scientific principles to fire suppression has been taken by the New York Fire Department by the inauguration of a "Fire, Gas and Chemical Laboratory," a unique feature of which is a mobile unit for conducting scientific "on-the-scene" tests.

The direct supervision of the Fire, Gas and Chemical Laboratory, according to the order establishing the enterprise, signed by Fire Commissioner Patrick Walsh, is vested in Second Deputy Commissioner Harry M. Archer, M.D.

The same order directs that "for administrative and disciplinary purposes this unit shall be in charge of the Commanding Officer of Engine Co. 33, but shall respond in command of an Acting Lieutenant or Fireman 1st grade assigned thereto."

Under command of Acting Lieutenant Milton Brody, the rolling laboratory is manned by four firemen, all in their early thirties, all of whom have majored in chemistry while at college. Lieutenant Brody was graduated from Long Island University in 1937 with the degree of bachelor of science in chemistry. Fireman John Kovach came from Brooklyn College in 1939, Fireman Max Glasser and Jesse Grosse are alumni of City College (New York) and Fireman Robert Winnung was graduated from New York University in 1938.

The laboratory and its mobile unit are the outcome of several years of planning and experimenting, largely by Lieutenant Brody and members of the department, in an effort to set up advanced safeguards for firemen and public against toxic gases, explosive mixtures, poisonous fumes, chemicals and acids. According to Dr. Archer "the laboratory is complete in every detail, and a pretty large affair, second to none in the city and the five men assigned to it have been selected with great care, and should know all the answers."

Mounted on a two-and-a-half-ton International Truck, the mobile laboratory looks from the outside not unlike a modern department store delivery truck, except for the conventional red finish. Inside, however, it is quite another story.

Most of the equipment carried is designed to facilitate making "at-the-scene" analysis of toxic gases, explosive mixtures, and chemical and physical tests. The truck also carries several types of gas masks, including the latest type self-contained products; forcible entry tools and a portable gasoline motor-driven generator to develop its own electrical power. Some of the equipment used was designed and built by Lieutenant Brody and his co-workers; other instruments and devices were purchased from manufacturers. Lieutenant Brody and his colleagues spent many weeks developing their own indicators for measuring the rarer gases which firemen might be called upon to encounter. At the same time they experimented with the various types of masks and respirators used by government and private agencies.

The mobile unit is not assigned to respond on normal fire alarm signal box alarms, but is "special called" as needed. It is, however, in service twenty-four hours a day.

According to the order establishing it, the Fire, Gas and Chemical Laboratory may be requested by the Officer in Command of any fire or other emergency when in his judgment its trained personnel and special equipment can be utilized advantageously. "When required for use other than at fires or emergencies, the Chief Officer in charge of the department shall be so advised and he in turn shall order a special call for the unit transmitted by the Manhattan Dispatcher."

The Fire, Gas and Chemical Laboratory is assigned as a "unit of the 3rd Battalion and 2nd Division." The member personnel "shall not be detained at a fire or other emergency longer than is necessary" in fulfilling the purposes for which it is created. In general, the laboratory is operated in compliance with the rules and regulations applying to other fire department units in quarters, and when responding to, operating at, or returning from fires or emergencies.

Although the primary purpose of Fire, Gas and Chemical Laboratory, according to the departmental order, will be to procure samples and make analyses of toxic gases, chemical fumes, explosive mixtures, chemicals, acids, etc., in buildings, vessels, or premises wherein the safety of operating forces may be endangered by these substances, the work of the technicians covers many other fields of fire service activity.

Actually, the Fire, Gas and Chemical Laboratory works with all branches of the fire department, including medical, fire prevention, investigation and apparatus as well as the fire fighting forces.

How and Where the Lab' Works

The first official special call for the mobile unit was received on Friday, October 5, at 1:59 P. M. (Signal 9-2161-33) on requisition of Chief David Kidney of the Bureau of Fire Prevention for a combustible job at 816 East 140th Street. It is reported that the rolling laboratory had been at that address upon previous occasions for the same purpose, although not in response to telegraphic signals.

The problem was to detect and determine if possible the source of fumes of what were believed to be petroleum solvents, which all summer long had been annoying employees of a paperbox factory at the location. The mystery had puzzled the staff of the Division of Combustibles of the department, which found that the fumes were more concentrated when the tide of the East River was high.

Inspector Barbuto of the Bureau of Combustible's staff discovered that the chemical tank of a neighboring factory that made wax dolls was the source of the trouble. The tank was losing 7 gallons of solvents an hour which disappeared into the earth. The tank had been in service ten years.

The escape of the contents, and the consequent fumes, alarmed the management of the paperbox plant who were afraid to light a fire in the furnace to obtain necessary heat.

Lieutenant Brody and Fireman John Kovach, answering the official call, returned to the scene with the mobile laboratory. They took samples of the contents of the pit in the cellar of the factory and, by means of their equipment and devices, they were able to determine that the fluids had a flash point of 115 degrees F. The survey and subsequent field tests were attended by Deputy Chief Muto, 7th Division; Battalion Chief

New York Fire Department Photo—Hellreigel

New York Fire Department Mobile Laboratory Has Many Unique Features

Unromantic in appearance, the traveling lab nevertheless affords additional safeguards for firemen by facilitating at-the-scene tests.

New York Fire Department Photo—Hellreigel

Interior View of Mobile Laboratory

Galligan, 14th Battalion, and by a representative of the oil company which supplied the wax doll factory with the special solvent that was escaping. The tank was ordered discharged and replaced.

Second Run: Subway in Danger

The mobile laboratory made its second run on November 15, when the unit with Lieutenant Brody and Fireman Kovach was called to St. Nicholas Avenue and 141st Street, Manhattan, where there was a heavy concentration of fumes in the Eighth Avenue Subway.

A subway inspector had detected the fumes about 11:00 A. M. He notified the fire department and Chief McAllister of the 16th Battalion responded. He was joined by Deputy Chief Dennis Curtin. The condition was then reported to Chief Kidney of the Fire Prevention Bureau and the mobile laboratory was ordered to the scene at 3:00 P. M.

Lieutenant Brody confirmed the findings of the inspector and the fire officials, namely, that there was a heavy concentration of vapor.

Having located the trouble, the task was to find the source of the gas. This was accomplished by the scientific detectives and it was found that a combination of crankcase oil, gasoline and water had leaked into the subway ducts and manholes from an oil separator in a nearby garage.

Manholes were vented immediately and conduit vaults and chambers in the subway were opened to permit the escape of the fumes. A spare pumper was brought into play by Captain Harry Irwin, Supervising Engineer of the Department, and the flooded manhole was emptied of its residue. Samples of the fluid were continually taken by Lieutenant Brody and Inspector Barbuto of the Bureau of Combustibles. Later, as night came, further specimens were taken and evaluated until it was scientifically determined that all danger of explosion had passed.

The Bureau of Fire Prevention took appropriate action against the offending garage owner the next day.

Nine Months' Search Is Productive

Although the mobile unit was not concerned in this episode, the incident had a bearing upon the decision to place the unit in service.

For a long time the department had been bothered by some unexplainable something which was clogging strainers and carburetors of its fire trucks, particularly those that did the least traveling.

Lieutenant Brody, assigned to locate the cause, if possible, put in nine months' research and disclosed that the combination of inert gasoline and copper gas tank caused a gummy residue which was not found in those trucks which did a lot of running.

Mere turning of the motors, it was revealed, was not enough to vitiate the affinity of long-standing gasoline for its metallic container.

Once the cause of the trouble was located, Chief Jones of the Fire Department Shops and Captain Irwin, Supervising Engineer, solicited Lieutenant Brody's services in an effort to develop an antidote.

The chemist obtained many samples and conducted intensive and numerous analyses. It was found that the gasoline itself was not at fault. After long and tedious experiments, and trial-and-error, Lieutenant Brody finally arrived at a solution—an antidote said to be known as methyl, ethyl, ketone—an acetone or organic solvent, which, when mixed with the gasoline in the tank, stabilizes the fuel and at low cost. This formula, it is said, calls for about ten ounces in each 1,000 gallons of fuel.

Subsequent reports are to the effect that the department plans to treat the gasoline in tanks of all fire companies that move infrequently and thereby eliminate the possibility of some fire apparatus getting "stuck" in quarters, or on the road.

Porcelain Plant Loss Near Million

A raging Sunday blaze destroyed the main plant of the Clyde Porcelain Steel Corporation, Sandusky County's largest manufacturing concern at Clyde, Ohio, November 11, throwing 650 workers temporarily out of jobs.

The fire, caused, it is reported, by sparks from welding operations on one of the furnaces in a furnace room where porcelain is baked on tile, home fixtures and other products of steel faced with enamel, was discovered at 3:15 P.M. and spread so rapidly that the steel, brick and concrete walls of the main structure toppled within about an hour.

The destroyed building also housed the company offices and laboratory. Only a few records were saved. A fire wall is credited with aiding firemen from Clyde, Fremont, Bellevue, Tiffin, Sandusky, Green Springs and Vickery—all in Ohio—to save an addition completed in August. A second company plant across the street was also saved.

Sheriff's officers and state highway police estimated that 20,000 persons stopped at the scene, and it was with effort that traffic was maintained on U. S. Route 20, which runs a few blocks from the plant.

Firemen are reported to have encountered some difficulty in getting sufficient water to fight the fire, but they were able to protect exposures.

The Sandusky Chapter of the American Red Cross and the Clyde Navy Mothers' Club served coffee for the firemen who remained on duty at the plant for seven hours.

Photo Courtesy Wm. J. Murphy

Clyde Porcelain Steel Company Fire at Its Height

Maryland Volunteers Hold Banquet

The second annual banquet of the Dorchester County, Md., Volunteer Firemen's Association was held at Hurlock, Md., Thursday evening, October 18.

The Association is composed of firemen from Cambridge, Hurlock, Vienna, East New Market, and Secretary, Md. There were about 150 present, the banquet being served in Firemen's Hall by the Ladies' Auxiliary of the Hurlock Volunteer Fire Company.

The speakers of the evening were: Mr. J. Otis McAllister of Vienna, Judge John J. Barth of Cambridge and Curtis G. Larrimore of Easton, Md., the latter representing the president of the Maryland State Firemen's Association. Mr. Larrimore spoke in behalf of the new State Fire College to be built at College Park, the details of which appeared in the October issue of FIRE ENGINEERING.

J. EMORY PARKS

AMERICAN-LAFRANCE ANNOUNCES POST-WAR FIRE APPARATUS LINE

Many Innovations Included in New Models; Survey Among Fire Chiefs Provides Usable Suggestions

The war has had a profound influence on the fire service, an influence that has already been defined in numerous articles in the editorial pages of FIRE ENGINEERING.

The editors are indebted to the American-LaFrance-Foamite Corporation for its cooperation in making available data for this article on how one manufacturer of fire fighting equipment has redesigned its line of apparatus.

We are fully aware that other fire apparatus and equipment manufacturers are also busily engaged in modernizing their lines and it is hoped that as rapidly as the complete stories of their developments become available, they will be told in these pages.—EDITOR.

THE development of the American-LaFrance's new motor apparatus has covered a period of several years, despite the fact that during the war the design of new apparatus was practically frozen, under the War Production Board control, and the company, with its contemporaries, was only permitted to purchase inventory for actual contracts. Notwithstanding this fact, and the fact that the demands of the government required the complete efforts of the company's engineering staff, and there was little or no time available for engineering development, the company looked forward to those days when restrictions would be removed, and the apparatus industry would face the task of meeting the resultant unprecedented demand for fire fighting equipment of every description.

This forward-looking took the form of a survey, made among the fire chiefs of the nation. At the Chicago Convention of the International Association of Fire Chiefs, the company exhibited an array of drawings and distributed a booklet called "Design Symposium" in which these drawings were reproduced and in which fire chiefs were asked to review the ideas advanced, and submit their own frank opinions and suggestions for "tomorrow's" fire apparatus.

"Perhaps," said the booklet's Foreword, "no basic change in design will be made after World War II, but new devices and new methods developed to cope with modern risks will produce trends to modify basic design . . . new materials such as light weight metals, extra strong steels, and plastics, to mention a few, will produce many changes in design construction. However, the general overall design as it effects utility and arrangement of the equipment are subject to revision as warranted by the experience and usage of the fire service."

The design symposium was an effort to seek out and utilize the experience and ideas of fire officers who are directly responsible for the selection and operation of fire fighting apparatus.

More than 700 replies were received by the company in answer to its quest for information. They came from volunteer and professional fire officers; from the small rural and community departments to the large metropolitan fire organizations.

These returns were studied, and the specific recommendations sifted, analyzed and tabulated.

It was found that the features desired were:

1. Better visibility for the driver.
2. Improved utility. Provide more space for carrying equipment and a better arrangement of the equipment.
3. Increased maneuverability. A shorter turning radius with improved acceleration and hill climbing ability.
4. Accessibility of the operating units for easier inspection and maintenance should be provided for engine and pump.
5. Better weight distribution for easier steering and more uniform tire loading with same size tires all around.
6. Provide five-man seating on all models of either open or cab types so that standard companies could be accommodated.
7. Make front-suction connection available.

Seventy-five per cent of the replies emphasized all of these seven points as being essential. On some of the individual items the percentages ran even higher.

To provide a maximum of visibility for the driver, the front end of the apparatus has been narrowed up so that the driver not only has the good visibility straight ahead, but at the sides as well. Further, by changing the windshield design and bringing it closer to the driver, he can now see at a much higher angle than heretofore.

About Streamlining

An interesting point developed by the survey was the preference of chiefs for utility rather than streamlining. Streamlining, it is disclosed, has proved in some instances to be a detriment to operating efficiency as it has increased the time necessary to remove suction hose, ladders and equipment.

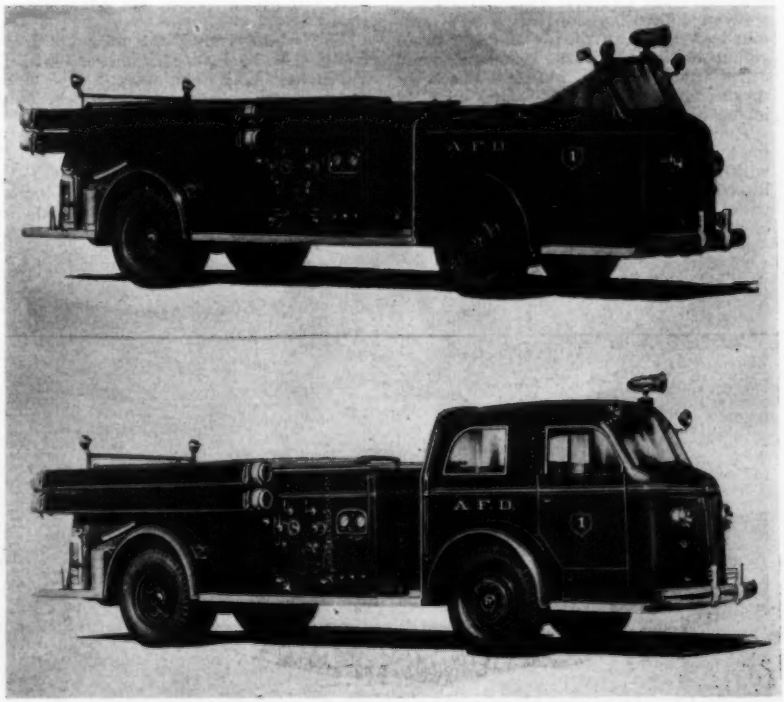
As a result of its finding, the company has mounted ladders and suction hose outside the body where they are easier to reach and remove.

Speaking of water tanks (boosters) the trend appears toward increased sizes and capacities. Therefore, in the new models, 150 gallon tanks have been made standard, with the option of increased capacities up to 500 gallons.

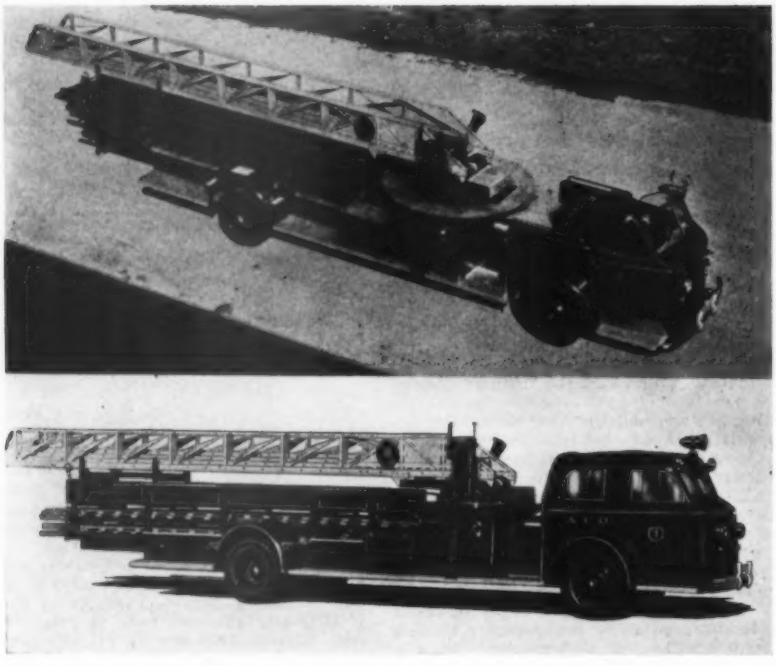
Another change is in the hose carrying capacity. The standard model in the new line has a carrying capacity for over 1600 feet of 2½-inch hose as compared with that of 1200 feet in present types (based, of course, on regulation 2½-inch double jacket service hose).

More Equipment Compartments

More equipment compartments are provided on the new units. One large compartment in the front of the body of the pump measures 45 inches long, 68 inches wide and 12 inches deep. This applies to pumpers of 500 G.P.M. to 1,000 G.P.M. capacities. On pumpers



Upper: American-LaFrance Open Type Standard Pumper. Lower: Cab Type Standard Pumper. Seating Facilities for Five Men in Each Type.



Upper: American-LaFrance Open Type Aerial Truck. Three Men Sit in Driver's Compartment, and Two in the Seats Facing the Rear. Lower: Cab Type Aerial Truck, Also Seating Five Men

of 1,000 G.P.M. to 1,500 G.P.M., this compartment is larger, being 55 inches by 68 inches by 12 inches.

In addition, there are four weatherproof compartments, two being located one on each side of the truck ahead of the rear fenders; each measures 21 inches wide, 28 inches high and 14 inches deep. Provision is made in these compartments for shelves. Two compartments are provided at the rear of the hose body of sufficient size to handle gas masks and other items of this nature. Each of these compartments is 14 inches wide, 14 inches high and 23 inches deep.

Running boards are still in vogue, and those on the new models are of sufficient width to mount fire extinguishers and kindred equipment, yet they are not wide enough for men to ride on the sides of the apparatus. The rear step, however, can accommodate from two to four men if necessary.

Maneuverability

Better maneuverability has been accomplished by shortening the wheelbase. Turning radius is reduced as a result.

The wheelbase on the pumpers from 500 G.P.M. to 1,000 G.P.M. capacities is 150 inches (both open and cab type models). Previously existing models have 175-inch wheelbase for open types and 180-inch wheelbase for cab type in the same capacities.

On pumpers of 1,000 to 1,500 G.P.M. capacities, the wheelbase is 160 inches for the open and cab type models as compared with the 180-inch wheelbase for the present open and 193-inch for cab type models.

Turning radius has been reduced on pumpers of 500 to 1,000 G.P.M. capacities from 32 feet to 24 feet, and on the 1,000 G.P.M. to 1,500 G.P.M. models it has been reduced from 35 feet to 27 feet.

The weights of all pumper models have been reduced approximately 1,500 pounds under present models. This gain, it is said, is largely due to the elimination of unnecessary sheet metal that formerly only served to streamline the existing models.

Accessibility and Weight Distribution

The engine has been relocated, making it possible for a mechanic to stand on the ground and reach any part of the engine for inspection and/or adjustment.

The cab-ahead-of-engine design affords better weight distribution, more uniform load on tires and affords definite improvement in steering. This design also enables the manufacturer to furnish seats for two additional men, one each side of the engine.

Front Suction Provided

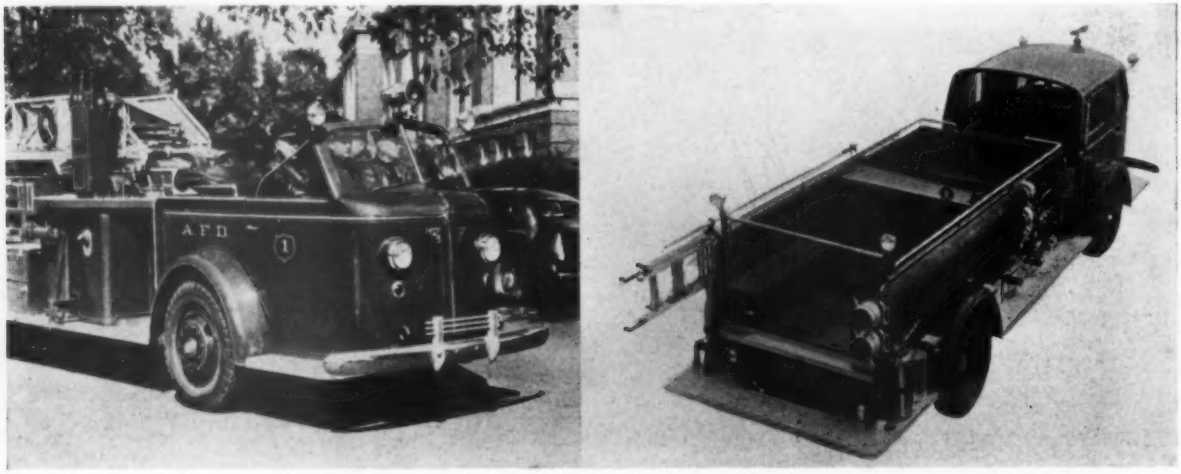
To meet the desire for front suction, that feature is optional in the new models. The front suction connection can be provided with blind cap or furnished with soft suction hose permanently connected, carried in a compartment in the front of the apparatus.

Improvements in Pump Design

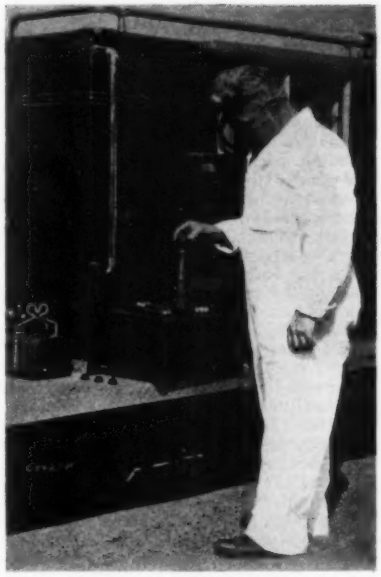
It is claimed for the new pump design that it is a definite improvement in efficiency over any pump previously offered the fire service by the company. It shows an improvement of about 8 per cent over the present American LaFrance pump design which in turn has a higher efficiency than the widely used rotary pump manufactured for so many years by the company.

This increased efficiency takes the form of less horsepower required to deliver a given quantity of water, and marked reduction in engine speeds. A greater margin of reserve beyond the rated capacity is insured.

The main features that have characterized American LaFrance centrifugal



Left: American-LaFrance Aerial, Showing Seating of Crew of Five Men. Right: Cab Pumper, Showing Interior of Body



On New Models of American-LaFrance Apparatus, Battery Slides Out for Testing

pumps are contained in the new design. These include all-bronze housings; bronze impellers; stainless steel shaft; all ball-bearing construction; replaceable seal rings in the eyes of each impeller and in the housing and automatic packings.

A new exhaust ejector primer is announced as another feature. The only moving part in the entire priming system is the valve in the exhaust line that deflects the exhaust gas through the primer when it is desired to prime the pump.

Standardization

All post-war models will have the same front-end design for seating arrangement and engine location and the same seating arrangement applies whether open or cab type is required.

The whole cab unit is mounted on rubber which frees the cab from any frame distortion that might result from traveling uneven surfaces. It also eliminates any warping of the doors.

The new seating arrangement further removes one of the objections found in previous canopy cab arrangement. This involved a loss of load carrying capacity of the hose body because of the aisle that was required.

As far as possible, standardization has been carried to the limit. As an example, engines—that is, all motive power—are interchangeable in all models.

Further simplicity and refinement—and accessibility—are evidenced in the new battery arrangement. The batteries are mounted on a sliding track which permits their visual inspection and the ready use of hydrometer. Batteries are located so as to provide extremely short leads to the starting motor. This, in turn, is operated by remote control from the instrument panel in the driving compartment.

Finally, the overall length of pumpers has been reduced somewhat—from 25 feet 11 inches to 24 feet 10 inches on the 750 G. P. M. pumpers, and 26 feet 4 inches to 25 feet 8 inches on 1,000 and 1250 G. P. M. models.

Recovers from 70-Story Drop

On July 28, a bomber crashed into the Empire State Building, killing fourteen persons and injuring many more. Most criticaly hurt of the survivors was Betty Lou Oliver who, with the elevator she was operating at the time of the crash, fell from above the seventieth floor to the basement.

Firemen and building employees who rescued the suffering girl from the wreckage marveled that she could still be alive. In the hospital her life was despaired of for days and it was said that if she ever recovered she would never walk again; she had a fracture of the spine.

On Tuesday morning, November 27th, almost four months to a day from her terrifying plunge, Betty Lou took her first steps, albeit with the aid of crutches. By nightfall she was so adept that she was able to promenade down the corridor of Bellevue Hospital, Manhattan, with her husband, Oscar L. Oliver, Navy torpedoman third class.

Mr. Oliver's home is Fort Smith, which he left to join the Navy, while Betty Lou departed for New York to take a wartime job. The husband was on the destroyer Haggard in the Pacific when the Empire State disaster occurred and was flown home on a thirty-day emergency leave, which subsequently developed into an assignment for shore duty in New York City.

The couple plan to make their home for the next five years in Philadelphia while Mr. Oliver studies architectural engineering at the University of Pennsylvania.

Chief Palmer Urges Strengthening of Fire Department

Fire Chief Hendrix Palmer, concerned that no mention was made for fire expansion facilities in Charlotte, N. C., in the initial report of the Charlotte Planning Board submitted Nov. 12, wrote Chairman C. W. Gilchrist and outlined the necessity of including an extension of the fire department program for "Greater Charlotte."

Already the city of Charlotte is suffering from "growing pains," and newcomers are turned away because they are unable to find housing. Although the city is pushing its residential building projects with energy, the Planning Board failed to include the Fire Department in its program outlining the taking in of more territory and the building of more homes.

Fire Chief Palmer had been ill in a Charlotte hospital, but when the Planning Board report was made public he put on his fighting togs, girded for battle, and here is the gist of what he wrote Chairman Gilchrist:

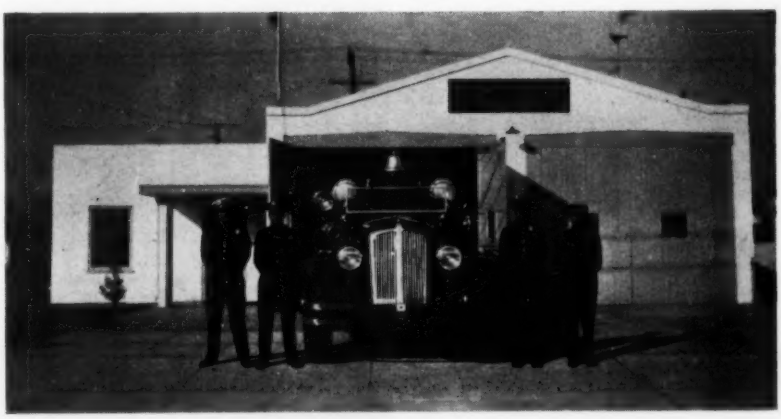
"If the city limits are extended, and that is a subject on the Planning Board's calendar, the Fire Department will be called upon to provide service in these new areas, and I am afraid all the available bond funds will be exhausted and the city will be unable to immediately finance the newly required protection.

"With extension of the city limits and inclusion of new territories in the boundaries of the city, the Fire Department will have added responsibilities, which will require additional equipment, and perhaps more stations.

"The National Board of Fire Underwriters will soon be coming back to Charlotte for a survey of its fire protective measures, and unless the department keeps pace with the growing demands, the city is liable to be penalized in its fire insurance rates. If the Fire Department is found to be insufficient in men and equipment to take care of added areas, then the fire insurance rate will be boosted with a penalty charge, and this will hit the pocketbook of property owners.

"At the moment the Charlotte Fire Department is handicapped by manpower shortage, which has been met only by the willingness of the firemen to sell their vacations and their days off by working at those times and receiving added compensation. Thirty temporary men have been employed to take the places of the 31 regular members of the Department still in the armed forces, and many of these are good fighters, whose services should be retained in the post-war period."

—D. G. Spencer



Modern Los Angeles County Fire Station

Los Angeles County, which boasts what is perhaps the largest county fire department in the nation, houses some of its many fire companies in up-to-date stations. One of these is that of Engine Company 40, which is located in Pico, Calif. According to Glen Alton, Whittier, Calif., who forwarded the illustration, the station houses a Seagrave 600 GPM pumper with 185 HP motor, and a 600-gallon water tank.

Photo by Russ Kennedy

At the Pacific Coast Association of Fire Chiefs Conference

Left to Right: Chief Raymond E. Allen, Riverside, Cal.; Commissioner William P. Payne, Spokane, Wash.; Chief John Alderson, Los Angeles, Cal.; Chief Jay W. Stevens, Secretary-Treasurer, Pacific Coast Association of Fire Chiefs, San Francisco, Cal.

Pacific Coast Fire Chiefs Meet

More than 125 fire chiefs and guests from Southern California and Arizona attended a dinner high spotting a two-day convention of the Pacific Coast Fire Chiefs Association, at Riverside, California, October 26.

Host chief was Raymond E. Allen of Riverside. Chief John Alderson of Los Angeles acted as master of ceremonies. The guest of honor was Chief Frank McAuliffe, Chicago Salvage Corps, second vice-president of the International Association of Fire Chiefs. He told the members about his recent visit to the bombed areas of Germany and England.

During the two-day business sessions, Chief Jay W. Stevens, P.C.A.F.C., secretary-treasurer, presented certificates of honorary membership to John Luxemberger, Santa Ana; Roy Davis of Fullerton and Fred Hirsch of Highland Springs, California.

A movie on fire prevention, which stressed forestry problems, was shown. A number of demonstrations were conducted showing the use of water fog, foam and modern fire-fighting apparatus.

Methods of extinguishing airplane crash fires were discussed by a lieutenant from Alemeda Naval Base.

The conference endorsed a proposal to enlist state and federal aid in establishing a fire training center for each state where actual fires of all types may be scientifically combatted by the student fireman.

The president of the Association is former chief, now commissioner, William P. Payne of Spokane, Washington.

Other speakers were: Chief John Alderson who discussed the manpower situation and Chief Harold Bowhay of Bakersfield who talked on the future of two-way radio for the fire service.

The State Board of Forestry met with supervisors from several counties to discuss fire prevention measures at the same time the Pacific Coast Association of Fire Chiefs was holding its sessions.

Procedure for Purchasing U. S. C. G. Boats

According to information released October 29 by the Public Information Division, U. S. Coast Guard, Coast Guard fireboats being decommissioned and declared surplus by the Coast Guard may now be purchased by municipalities throughout the nation, through the facilities of the War Shipping Administration.

As soon as Coast Guard Headquarters (Washington, D. C.) is advised by a District Coast Guard Officer that certain fireboats are surplus to the needs of the District, and this position is concurred in by Headquarters, the Coast Guard will advise the Maritime Commission or War Shipping Administration that such boats are available for disposition as surplus property. If the boat is an acquired or converted vessel, it is handled by War Shipping Administration. Coast Guard owned boats are handled by Maritime Commission. The facilities of the War Shipping Administration will be used for the final sale of such boats.

In the case of vessels acquired from civilian sources, the original owner has the right to repossess the vessel before any steps are taken to call for public bids. If the owner elects to repossess his boat, no public bids are solicited. The price to the former owner will be determined with consideration given to the condition of the boat and the alterations necessary to restore it as nearly as possible to its original condition. Equipment left on board will be considered by War Shipping Administration under a pricing formula adopted by it, in making settlement with the former owner, including fire fighting equipment if so desired. In the case such a boat is not returned to the former owner, War Shipping Administration then offers it for sale through competitive sealed bids.

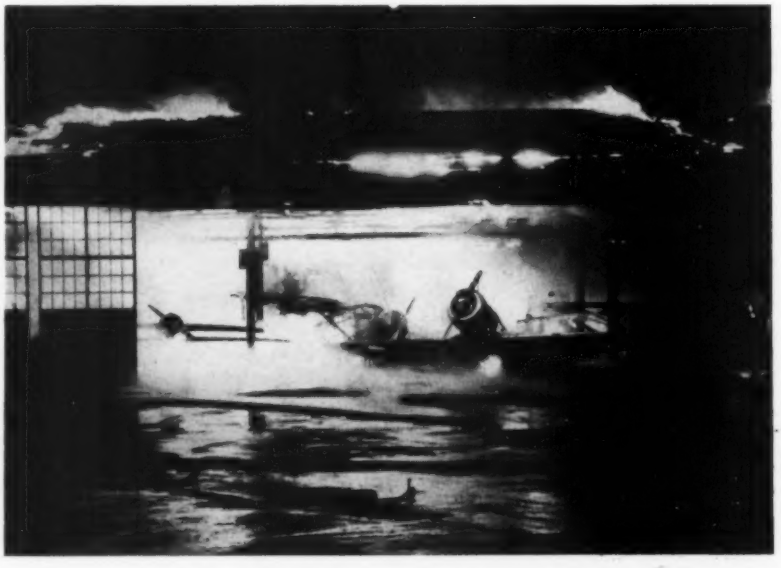
Fire pumps and necessary attachments left intact on all converted fireboats used by the Coast Guard will be removed or disposed of as required by War Shipping Administration.

The exact number of converted vessels for such acquisition by municipalities to serve as fire protection for waterfront facilities cannot be accurately foretold. There are a number of Coast Guard built fireboats available as surplus property. It is suggested that municipal authorities interested in obtaining fireboats of either type contact the Director, Small Vessel Procurement and Disposal Division, War Shipping Administration, Washington 25, D. C.

Houston Oil Fire

It required eighteen hours hard fight for firemen to gain control over one of the city's worst oil fires which wrecked three large oil storage tanks, threatening the entire Manchester residential and business section. Twenty-six persons were hospitalized.

Fire started when lightning struck a 55,000-barrel crude oil storage tank. Exploding oil and intense heat drove firemen back but they were able to hold the fire in check until two 15,000-gallon high octane gas tanks exploded. A second blast spread flames shoulder-high for several blocks around the Eastern States refinery, injuring firemen and spectators. At this point the evacuation of Manchester residents was ordered by Fire Chief Homer Lyles.



Wichita Municipal Airport Hangar Burns, Loss $500,000

City airport's largest hangar and forty airplanes were destroyed in two-hour early morning fire September 26.

Garage Blast Kills Two Firemen

Two firemen of the Arlington, Mass., Fire Department died and three others, including a deputy chief, suffered serious burns as a result of an explosion during a flash fire in a garage in Arlington, October 27. The tragedy was the worst ever to befall the Arlington Fire Department, of which Daniel B. Tierney, widely known Secretary of the International Association of Fire Chiefs, is head. His brother John M. Tierney is the deputy chief who was seriously burned.

The dead firemen are Herbert G. White 48, Engine Co. No. 1 and Edward J. Ryan, 40, attached to the Special Service Truck. White died at the Symmes Hospital the morning following the blast, while Ryan lingered for a week before succumbing from burns.

Others injured in addition to Deputy Chief Tierney, were Francis J. Neville, 49; Daniel B. Coughlin, 47 and George Kenny, 47, all members of the Arlington Department, and John Viola a mechanic in the garage, who was burned in an attempt to extinguish the fire.

The fire, which did only a few thousand dollars worth of property damage, occurred in a garage of cement block construction used for the storage of fuel oil delivery trucks owned by the Kelly Corporation, Arlington.

According to Fire Chief Daniel B. Tierney the initial fire—shortly before 9:00 A.M.—was caused by a spark from a wire brush which ignited gasoline with which the mechanic was washing one of the oil trucks. The mechanic, Viola, was burned on the hands in a fruitless effort to extinguish the fire.

Meanwhile firemen arrived in response to an alarm from box 242 and used hand extinguishers in attacking the fire. Fumes, however, forced them to don gas masks as they re-entered the building with a hose line. As the stream of water hit the fire a terrific blast rocked the building, and flames enveloped the garage. Firemen were knocked to the floor and White and Ryan were hurled clear out of the garage. Dungarees worn by the men were torn to shreds by the explosion while their helmets were charred by the ignited gases.

Fire Prevention Week at Bridgeport, Conn.

In the photo are, left to right, Thomas M. Webb, President of the Bridgeport Safety Council; Ken Rapieff, radio announcer; State Police Commissioner Edward J. Hickey; Fire Chief Martin J. Hayden; Police Chief James Kranyik of Fairfield; George Wellington, President of the Board of Fire Commissioners, Bridgeport; Police Chief Raymond Beckwith of Trumbull, and Superintendent of Police John A. Lyddy of Bridgeport.

Edward J. Hickey Honored

"Firemen are like doctors in that their importance is often not realized until time of need," said Edward J. Hickey of Hartford, Conn., State Police Commissioner and Fire Marshal, in speaking before the Bridgeport Safety Council meeting at Bridgeport on October 10, where he was made a life member of the Council for "outstanding service to the citizens of Connecticut."

"Fire losses in the nation which reach billions annually, are preventable since all fires are caused by carelessness and ordinary care would prevent all this loss. We are victims of our own waste."

Officials from Bridgeport and surrounding towns who attended the meeting were Supt. of Police John A. Lyddy, Chief Martin J. Hayden, Police Chiefs James Kranyik of Fairfield and Raymond Beckwith of Trumbull; George Wellington, President of the Bridgeport Fire Commission and Capt. William L. Schatzman of the State Police Dept. Thomas M. Webb of the Bridgeport Brass Company presented Comm. Hickey with the life membership award. The program was broadcast over Station WICC of the Yankee Network.

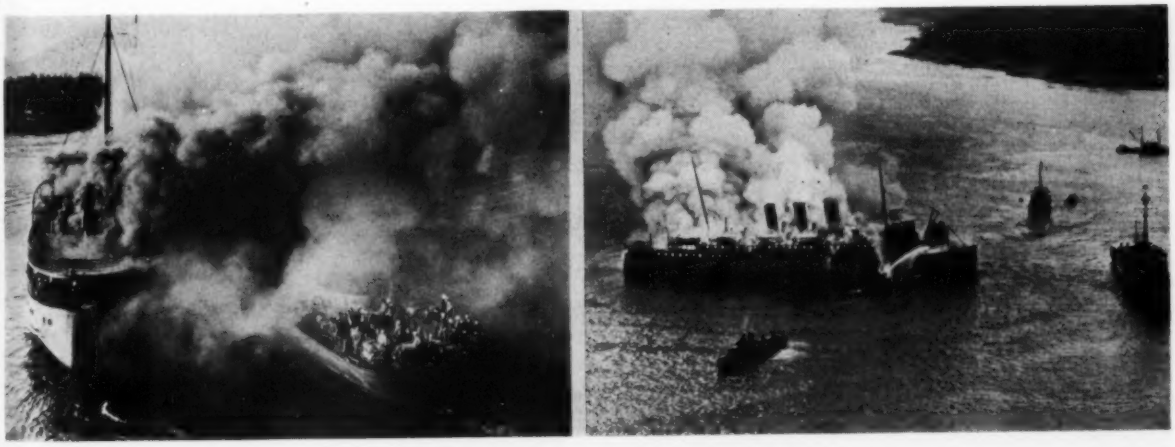
THOMAS F. MAGNER

Salem County, N. J., Has Live Group

Back in 1924 the progressive firemen of Salem County, N. J., organized the Salem Firemen's Association. Since that time the membership has grown to 400, representing 20 fire companies from 15 municipalities and townships.

Recently the group created an additional organization composed of Chiefs, Assistant Chiefs, Battalion Chiefs, Captains and Lieutenants to be known as the "Salem County Fire Chiefs Association."

The following were elected at the organization meeting: President, David Johnson, Pennsgrove (he is also County Fire Marshal); Vice-President, Batt. Chief William B. Plasket of Salem; Secretary-Treasurer, Asst. Chief Robert S. Bell, of Elmer.



Steamship "Prince George" Burns at Ketchikan, Alaska

Left: Coast Guard frigate "Annapolis" maneuvers to tow the blazing steamship Prince George away from port at Ketchikan as fire gains in intensity. Right: Steamship fully involved by fire. Coast Guard fireboat makes futile attempt to bring fire under control. The ship was completely gutted, and the blackened hulk was towed to nearby Gravina Island. Out of a crew of 100, only one man was lost on the burning ship.

Prominent at the annual meeting of the International Municipal Signal Association were (left to right) Edward C. Denstaedt, Supt., Communications, Detroit Police Department, chairman of the Radio Round Table; David Talbot, Fire Alarm Bureau, Chicago, Ill., General Chairman of the meeting; Chester Shoffer, Supt., Electrical Bureau, Chicago, Ill., and Frederick B. Philbrick, President, The Gamewell Company.

50th Annual I.M.S.A. Meeting

The International Municipal Signal Association held its 50th Annual Meeting at the Hotel LaSalle, Chicago, November 12 to 15 with over 400 registered.

High points on the opening business program were addresses by L. M. Johnson, Commissioner of Streets & Electricity, Chicago, on "Chicago's Post-War Program of Public Works"; Frederick B. Philbrick, president and general manager, The Gamewell Company, whose subject was "What to Expect in Fire and Police Alarm Systems."

Tuesday, November 13, was devoted to radio, almost every phase of the problem of emergency radio communications receiving attention at the "Radio Panel" directed by E. C. Denstaedt, Director of Communications, Detroit Police Department.

Technical Discussions

Taking prominent part in the discussions were: Dr. Daniel E. Noble, General Manager, Communications and Electronic Div., Galvin Mfg. Co., who spoke on the "Allocation Plan of the Radio Technical Planning Board"; George W. Pettengill, Engineer, Radio Corporation of America, whose topic was "Emergency Communications Move Forward"; Lewis J. Boss, Federal Telephone and Radio Corp., who spoke on radio circuits, and Frank A. Bramley, Radio Engineer, Connecticut State Police, whose topic was "Proper Generators and Batteries in Mobile Radio Equipment."

Among the others participating in the discussions were Herbert A. Friede, Superintendent Fire Alarm Bureau, Washington, D. C.; George Brown, General Electric Co.; Fred Link, president, Fred M. Link Co.; Fred Schnell, Chief Engineer, Chicago Police Radio System and Gilbert Brown, Federal Telephone and Radio Corp.

The Association approved a Resolution offered by Roi B. Woolley, Chairman, Committee on Communications, International Association of Fire Chiefs which would bring that Association and I.M.S.A. in agreement in protesting the indiscriminate public broadcasting of news of emergencies and disasters involving the fire service.

Other papers included one by A. S. Basil, Chief Engineer, U. S. Rubber Company's Wire and Cable Div. on "Rubber" and one by Alfred Theurich, Superintendent Fire Alarms, Pasadena, Calif., Fire Department on "Fire Alarm Practice."

The entertainment program included a get-together luncheon by the Galvin Manufacturing Co.; a party given by the United States Rubber Company: "Ye Olde Time Firemen's Ball & Halloween Frolic"; luncheons for the ladies by the Hazard Insulated Wire Works and John A. Roebling Sons, Co., and "Gamewell Night," host for which was the Gamewell Company.

David J. Talbot, Chicago, was general chairman of the convention. The technical Program was in charge of Wm. F. Qualls, South Bend; Exhibits were arranged by George Baurer, Milwaukee, Wis.; Entertainment, by Charles F. McQuillin, Gary, Ind.; Memorial and Resolutions by Robert J. Gaskill, Ft. Wayne, Ind., and Registration in charge of Peter Camp, Grand Rapids, Mich. G. E. Wood, City Electrician, Houston, Tex., president of the Association, presided. Irving Shulsinger, secretary, and his Assistant, Mr. Riley, handled business details.

At the luncheon given by the Galvin Manufacturing Company were (left to right) the Messrs. McCarthy, Daniel E. Noble, Galvin, David J. Talbot and Chief Frank McAuliffe, Chicago Fire Patrols.

An Unusual Record

Chief D. W. Brosnan, of the Albany, Ga., Fire Department, has accomplished a most unusual record. He has recently completed thirty-five years as head of the Albany Fire Department with no loss of life or no injury to a citizen in a burning building during his command of the department.

In addition, during this period no loss of life has occurred among the members of his department due to fire, nor has any fire extended from the building in which it originated to an adjoining or adjacent building; nor have two residences burned in a single fire.

Tacoma Takes Precautions

Stringent fire protective measures have been taken in Tacoma, Wash., for apartments, rooming houses, hotels and public buildings, according to Public Administration Clearing House. The same regulations as are specified in the new building code are applicable to buildings now in existence. Ceilings, walls, and floors separating manufacturing plants or commercial establishments from living quarters in buildings two or more stories in height must be, under terms of the ordinance, of "at least one hour fire resistive construction." Application of ½-inch plasterboard over existing plaster, however, is to be allowed.

Photographed at the I. M. S. A. meeting were (left to right) Fred Link, President, Fred M. Link Company; Charles Harris, Supt., Fire Alarm Telegraph, Cleveland, Ohio; William F. Qualls, Vice-President, I. M. S. A., and Chairman of the Program Committee; Herbert A. Friede, Supt., Fire Alarm Bureau, Washington, D. C., and Joseph Siddall, H. H. Robertson Co., Pittsburgh, Pa.

Massachusetts Chiefs to See Melamine Tests

At the January 16 meeting of the Massachusetts Fire Chiefs Club it is planned to run a series of tests on the toxicity of gases released by burning Melamine.

These tests will be conducted by technicians from the staff of Foster D. Snell, Inc., chemical research specialists, of Brooklyn, N. Y.

The demonstrations will parallel the ones recently staged before the New Hampshire Fire Chiefs Club, and about which some controvery has arisen.

In addition, there will be a discussion on Melamine by qualified chemical engineers.

Milwaukee Fire Prevention School

The fire prevention division of the Milwaukee Association of Commerce opened its 22nd annual fire prevention school November 19th for key employees responsible for fire protection, and more than 350 men of plant fire brigades organized during the war in industrial plants. It is primarily a refresher course, designed to prepare men to prevent destructive fires during the reconversion.

Oil Tank Blast Injures Fifteen

Fire, believed caused by the ignition by a passing motor vehicle of fumes from leaking crude oil, involved a 100,000 barrel oil tank in the Bayonne Terminal of the Standard Oil Company of New Jersey, November 6, injuring fifteen persons, two of them seriously.

The fire, for which a general alarm was sounded by Fire Chief James G. Hogan of Bayonne thirteen minutes after the blast (which occurred at 9:43 A.M.), was brought under control seven hours later by 100 firemen from nine of Bayonne's twelve companies, fighting side by side with the oil company's plant brigade under Chief Brown.

According to the Standard Oil Company, no employees were in the area of the tank when the explosion took place. Lacking official statements as to the cause of the explosion, it is reliably reported that combustible fumes emanating from oil which had leaked through a defective or broken valve, were carried down the short distance to a highway, where they were ignited by a passing vehicle.

Three of the injured were said to be motorists who were burned when flaming oil showered two motor cars passing the plant at the moment the unexplained blast occurred.

Joseph Farrell, 54, a fireman of Bayonne, suffered third-degree burns of the neck and shoulders when the roof of the tank fell in, scattering burning oil over a 100-foot area. Both the seriously injured men were taken to Bayonne City hospital.

The collapse of the tank roof spattered oil on eleven other persons (firemen and Standard Oil employees), burning them slightly. They were treated at the scene.

Another vehicle set afire by the flaming oil from the blast, was a wood truck. Both riders on this vehicle fled from the blazing truck and took refuge behind a near-by wall, escaping more serious injury. It is said that possibly the exhaust from their truck may have been the cause of the ignition of the volatile fumes.

Unofficial reports indicate that approximately 17,000 barrels of the storage were saved by being drawn off through separators and that the body of the fire occurred outside the tank in the spilled oil, confined within the levee. It is said that the tank was ruptured after considerable of the oil had been drained off. The contents of the tank at the time of the fire could not be learned.

According to other unconfirmed reports more than fifty tons of chemical foam were used in the fight to control the fire. Heavy hose streams were employed to cool down nearby tanks.

At the Fire Department Instructors Conference Meeting at Brooklyn

The Fire Department Instructors Conference Committee on Fire Training met informally at the U. S. Navy Fire School at Brooklyn, N. Y., on October 30 and 31. The above group of four leaders in the field of Fire Protection was photographed by "Bill" Scott, Fire Marshal of Ontario, at the Navy's Brooklyn school. Left to right, they are: Horatio Bond, Chief Engineer, National Fire Protection Association; Commander Harold J. Burke, Damage Control Section, Bureau of Ships, U. S. Navy, Washington, D. C.; Fred Shepperd, Editor, FIRE ENGINEERING; Robert S. Moulton, Technical Secretary, National Fire Protection Association.

Fifteen Injured in Bayonne Oil Storage Fire

Aerial view of hot, smoky fire in Standard Oil Company (N. J.) tank in huge Bayonne, N. J., Terminal.

Four Fire Forces Fight Losing Battle

Efforts of fire forces from Hingham, Hull and Cohasset, called by Chief Howard Cole of Scituate, Mass., to aid his hard pressed firemen in an effort to save Hugo's South Shore eating place in North Scituate, were unable to prevent the total destruction of the noted restaurant with a loss of more than $100,000.

The fire, apparently starting in a garbage room at the southwest corner of the building off the kitchen, spread rapidly, with explosions of liquor bottles and oil endangering firemen. It was discovered by a caretaker asleep on the second floor who escaped over a rooftop. He notified neighbors, who turned in an alarm. Meanwhile, an automatic alarm system had summoned Scituate firemen, who were forced to stretch hose from a single hydrant 1500 feet away.

Chief Cole summoned aid from three neighboring communities but it is reported lack of water and the terrific start given the flames prevented the saving of the frame structure. When the drain on the single hydrant became too great, pumpers were located on a stream leading in from the salt marshes behind the restaurant, and forced water up grade to the fire.

The only casualty was a cat, one of three, which perished. A hunter, nearby when the fire started, saved one pet and another eluded the flames herself.

Extra Pay for Firemen

An ordinance specifically authorizing extra pay for firemen who work time normally allowed them for vacations and lay-off days has been adopted by the Johnstown, Pa., city council. The ordinance was made effective as of last May 21, to eliminate any question regarding vacation dates for firemen.

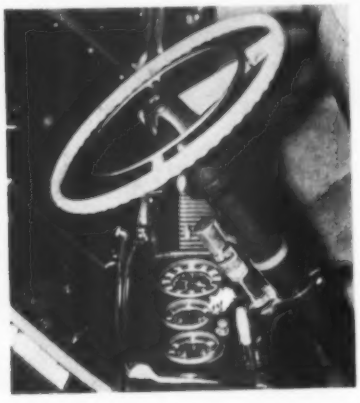
Manufacturers' Announcements

New Extinguishers by Union Stop-Fire

The Union Stop-Fire Corp., Brooklyn, N. Y., manufacturers of precision parts, is now engaged in the manufacture of fire extinguishers.

Three types are at present in production, one an automotive model, bracketed for easy mounting on the steering column of a motor car, which is little larger than a flashlight and which employs Methyl Bromide as the extinguishing agent. The second is the Stop-Fire One-Quart Stored Pressure Model (using carbon tetrachloride precharged with CO_2) which it is claimed, is the only one-quart pressure type now on the market. This model is designed for effective operation on grease, oil, electrical and stove fires. In operation the extinguishing agent is atomized by means of a specially designed valve into a gas, which it is said, will not harm fabrics or papers, and is a non-conductor of electricity. The third Stop-Fire Model is a one-quart pump-type having a self-sealing device which it is claimed prevents evaporation and leakage. It is said that this unit will enable the operator to fight a fire effectively at a range of over thirty feet with a continuously solid stream devoid of air pockets or bubbles. The stream is discharged with the first intake stroke.

The company processes the carbon tetrachloride F.X. fluid used in both its stored pressure and other models in its own laboratory.



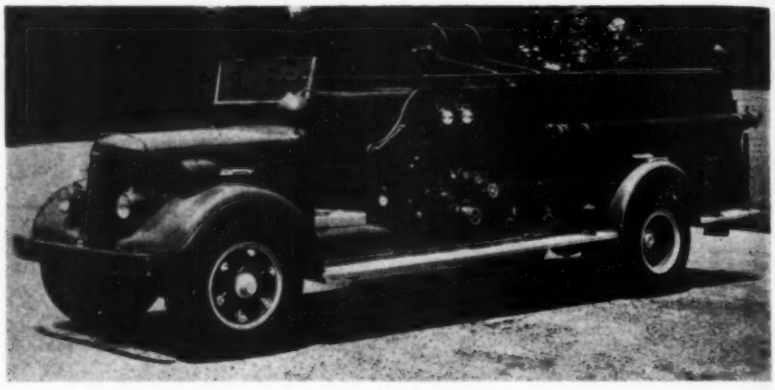
Stop-Fire Automotive Model Fire Extinguisher

Pressure Type Stop-Fire Extinguisher Being Operated on Stove Fire

New Data on Auxiliary F. D. Pumps

New literature (Bulletin 8120) has been issued by American-Marsh Pumps, Inc., Battle Creek, Mich., describing the company's new auxiliary booster pump for fire department service.

The new portable unit will deliver as much as 300 gallons per minute to booster tank or direct to pump suction from sources inaccessible to or beyond the suction lift of motorized apparatus. It has numerous other uses which make it invaluable for general community and fire service use, many of them mentioned in the bulletin.



White Fire Truck Delivered to Managua, Nicaragua

Nicaragua Gets American Fire Truck

The municipal fire department of the city of Managua, capital of Nicaragua, recently was shipped an American-built fire truck—product of the White Motor Company, Cleveland, Ohio.

Specially crated for its long journey, the unit is equipped with a 500-to-600 GPM pump and 650 GPM foam generator for use beyond the regular city water lines. Equipment carried includes 1,000 feet of standard hose, 12-foot roof ladder, 20-ft. extension ladder and the usual tools and fittings. It is powered by a Model WA-22 White Super Power Unit.

New Homelite Lightweight Generators

Production of two new gasoline engine-driven generators is announced by the Homelite Corporation, Port Chester, N. Y.

Designed as a portable power source for electric tools, floodlights, radio, amplifying or motion picture equipment, the units can be moved quickly to any location or job. They are said to be ideal for emergency power or when power lines are inaccessible. The Model 21D, a 2000-watt 120-volt D. C. generator, weighs 105 pounds and the Model 21A, a 1800-watt, 115-volt A. C. generator, weighs 115 pounds. Both units have overall dimensions of 22⅜ x 17⅛ x 21½ inches.

The units are reported to incorporate new features developed for the Army and Navy. The use of aluminum alloys for all large castings has permitted an increase in output without sacrificing portability. The single-cylinder air-cooled two-cycle engine has only one valve, a rotary disc type which is self-seating and requires no adjustment. A strong spark for easy starting is supplied by an improved Wico magneto. Engine speed is controlled by an automatic built-in governor. A pressure-vapor oil system sprays a film of fresh oil over all moving parts with each revolution. The generator is direct connected to the engine, with the armature mounted on the engine crankshaft.

(Continued on page 962)

The WATCH DESK

Overhauling the firemanic news of the day

by ROI B. WOOLLEY

Now You Tell One!

If we didn't know Edward Carney, contributor of this Ripleyesque, we'd raise a skeptical eyebrow over this'un. But Carney, Secretary of the Fire Chiefs' Emergency Plan, of Westchester County, N. Y., swears it's true, and the records of the Chappaqua, N. Y., Fire Department bear him out.

Members of that volunteer organization were staging an exhibition fire drill in the village on an evening during Fire Prevention Week. The idea was to show the natives how well they were trained in their job.

One engine company was on the roof of a taxpayer occupied by a grocery concern, getting ready to go to work on a simulated fire in the structure, when, lo and behold, they noticed real smoke coming through a skylight in the roof.

The vamps hurriedly notified the chief of their discovery and he forced an entrance into the store, where a real fire was found burning among some brooms and mops.

The fire was promptly extinguished to the edification of the admiring spectators, most of whom no doubt thought it was all a part of the exhibition.

* * *

From "Smokestack" Hardy

From a bundle of choice items sent in by A. Hardy, Baltimore, Md., fire buff we cull the following:

DENVER: After twenty years as a fire horse and nineteen more as a work horse for the home for the aged, Old Tom, a snow-white Percheron, was at the end of his career. Patrolmen Olaf Haugen and James Lindsay stood in his stall juggling the disagreeable question of who should administer the *coup de grace*.

Before they could reach a decision Old Tom's soul quietly slipped his earthly harnees, and departed for those celestial equine green pastures, where all good fire horses gather.

KRESS, TEX.: Not new, this, but it allus rates a notice. Down in these parts, Ed Hostetler, farmer, was told by his family that he'd set his house on fire with a jug of water (and it wasn't "fire water" either).

Despite his disbelief, it was actually so. He had left a gallon jug on his front porch about a foot from the wall. The Texas sun's rays fell on the water jug, converging in a spot of intense heat on the boards and setting them afire.

Deponent saith not whether the jug broke, and the water put out the fire—or what happened to the farm house.

DENVER: A large and belligerent dog apparently regarded a fire hydrant as his personal property one evening, when firemen, responding to an alarm for a fire in a residence attempted to use it.

The brothers had to use an emergency tank on the truck until fireman Charles Robinson could shoo away the snarling canine with a hydrant wrench. Truckhouse wits can write their own caption for this 'un.

JUDA, WISC.: Last summer a saleswoman, selling fire extinguishers, called on Mrs. Glen Maske. She had not the slightest difficulty selling her wares because, believe it or not, the Maskes were busy fighting a chicken-brooder house fire just when the saleswoman arrived!

The office quipper wants to know if these are the "Smoke Maskes" he's been hearing so much about.

* * *

A Quicksand Rescue

Following hard upon the heels of the suggested "short-cut" for rescuing a man from quicksand, published in the October issue of FIRE ENGINEERING comes a report from Keansburg, N. J., about the rescue of Walter Gilbert, 68, of that place.

Gilbert, rescued from a quicksand pit after fifteen hours' imprisonment, was hospitalized in critical condition after his experience, suffering from submersion and exhaustion.

Up to his neck in the sands by the time he was found by firemen and Boy Scouts, Gilbert was extricated by firemen after a forty-five minute struggle who used ladders as bridges across the treacherous muck. The victim was so weak following his rescue that he could speak only in whispers.

The method of saving victims immersed in quicksand, as told in the October "Short Cuts" i.e., using fire streams, evidently was not tried.

* * *

Mad at Father—Sets Fire

Brooding over his parents' separation, Seth Steinberg, 15, with the help of a friend, broke into the apartment of his father at Central Park West, New York City, and "got even" by setting fire to the furniture. Smoke pouring from the seventeen-story building brought firemen who listed blaze as "suspicious" and soon the two youngsters were picked up.

Steinberg induced his friend, Geir Bjornson, 16, to force a window, whereupon Steinberg attempted to open a small safe with light tools; when this failed, he tried to melt it with household chemicals. He then stuffed papers into upholstered furniture and fired it. When smoke accumulated, the boys fled. Steinberg said "I was so mad at my father I would have burned up the whole apartment." Bjornson was charged with burglary and arson; Steinberg, for juvenile delinquency.

* * *

Hot Off the Ticker

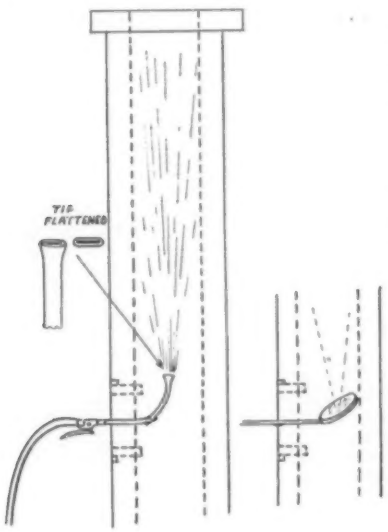
When fire broke out in Mrs. Henry Arigoni's living room, North Adams, Mass., somebody sounded an alarm, but before firemen arrived she had extinguished the flames—with vinegar. . . . Charging the Pittsburgh-Des Moines Co., Pittsburgh, Pa., with having been negligent in constructing and testing the East Ohio Gas Co. storage tanks involved in an explosion October, 1944, in Cleveland, the estates of four Cleveland victims of the disaster have filed suits for a total of $400,000. Each suit asks $100,000. . . . The heart of Clendra May Frees, 8, Los Angeles, Cal., stopped five times during an hour and 45 minutes before she finally died, according to doctors who, with firemen, tried vainly to save her. After a doctor had removed her tonsils at 1:10 P.M. her heart stopped. With the aid of a fire department inhalator squad and neighboring physician, the doctor revived her. But four more times her heart ceased to beat before it failed for keeps at 2:55 P.M. . . . In Larchmont, N. Y., the fire department adopted a new three-digit system fire alarm code signals but forgot to change the two-digit number of the special box in the local school house. A false alarm from this box one evening caught the vamps with their turnouts down or, as the office wit says, in their "unawares"—and it was some time before anybody could figger out where the fire was. . . . Phillip Jankowski, 48, Buffalo, N. Y., was killed when an oxygen unit exploded. . . . A wing of the science school at Eton, famous British school was destroyed by fire in August. . . . A 32-year old New Jersey mother believed mentally deranged, killed her two small daughters with a hammer, set fire to her four-room bungalow and met her own death either by burns or poison. Three fires apparently set by an acetylene torch, after beds and furniture were sprinkled with inflammable cleaning fluid, were blazing when police arrived. . . . Lou Nova's horse couldn't hold a candle to Mrs. O'Leary's cow, who made things hot for Chicago. But if history doesn't tell what happened to the Chicago bovine firebug, lots of Los Angeles folks know what became of the heavyweight boxer's nag. Seems his hoss kicked over a butane tank and started a fire that burned up Lou's house—and his hoss. . . . It was hot in Houston, Tex., in August, so hot that the high of 96 deg. F. exploded a container of decontamination powder and started a fire aboard a Liberty ship. . . . Four girls, aged 9 to 12, set a $30,000 blaze in the Pennsylvania Railroad Union Stockyards, Lancaster, Pa., because their dolls were too dull—and they "wanted excitement." . . . When a fifty-gallon metal drum which he was cutting apart with an acetylene torch exploded, Joseph Weiss, 43, Jersey City, N. J., suffered compound fractures of both legs. . . . A cigarette started a fire that destroyed a 100-foot section of the east end of the Penrose Ferry Bridge, Philadelphia, Pa., and threatened nearby oil refining tanks. . . . Knute Neverson, 55, Brooklyn, N. Y. C., died of chemical gas poisoning when his oxygen supply failed while he was cleaning a tank in the hold of a vessel in the East River. His helper was rescued by the deck crew. . . . A tank of what police report was sulphur dioxide exploded on a truck in Getty Square, Yonkers' busiest downtown spot, at noon, injuring four persons. . . . In Cleveland, Ohio, Mrs. Helen Moraghan, 34, was dead because, firemen say, she attempted to save a photograph of her soldier-husband from her burning home. . . . In Denver, Colo., James R. Lira, 24, driving a truck carrying 2,000 pounds of dynamite, lost control of the vehicle when brakes snapped. Piloting the machine through heavy evening traffic, he managed finally to stop the truck on a slight upgrade after he had threaded his way safely through a thick stream of cars. . . . Fire Chief

(*Continued on page* 980)

Short Cuts and Gadgets

MORE ON EXTINGUISHING CHIMNEY FIRES

From J. Emory Parks, Cambridge, Md., comes still another suggestion for putting out chimney fires—but let reader Parks tell it in his own words:



In an earlier issue of FIRE ENGINEERING appeared an article showing extinguishment of chimney fires by use of a small tank and extension pipe to hook over the top of the chimney.

Our method is simpler than that and less messy insofar as water damage is concerned. Further, you don't even have to put your hand in the chimney hole to put out the fire.

We use a regular chimney hose outfit, ½-inch size, which is suitable for and equipped with a device to snap on to any kind of kitchen or bathroom faucet. The hose being about 50 feet long enables us to go to the chimney hole, either upstairs or down.

The nozzle or tip, which is very small, has a squeeze valve. To this small nozzle we brazed a bent tip of copper tubing similar to that used for gasoline line on automobile and squeezed the end together so as to make the water come out fan shaped and with force. This extension, being about 12 inches long and bent, enables the operator to insert the tip in the chimney hole and turn it any angle he desires. The smallness of hose and tip will provide enough pressure from the faucet to carry the stream from the upper hole to the top or from the bottom hole to the one on second floor, assuming of course a two story house is involved. It puts out the fire with hardly any water at all. No ladders to fool with and when finished, disconnect from the faucet, roll up the hose, put a strap around it and hang it on the truck.

If we want to see if any more fire remains in the chimney without going to the top and looking down we merely insert a mirror in the holes and have a "look see." This is an auto rear-view mirror of the round variety with a longer handle welded on and bent at an angle. If there are any sparks or glowing soot left it will show in the mirror. Then we can apply more water until the fire is completely extinguished.

This works on most ordinary chimney fires. Of course the ones that get like furnaces require more drastic action from booster pumps. The chimney hose is sold by all distributors but not the extension tip. The illustration explains it all.

* * *

TO IDENTIFY PADLOCK AND KEY

Firemen may have occasion to use a number of padlocks around the firehouse, or they may encounter them in buildings, factories or other places and as a result it has happened that in an emergency they have had difficulty in locating the right key for the right padlock.

Borrowing an idea from those fire departments that identify different company hose by colored marking on their hose couplings (or where company tools are similarly marked for ready identification) it has been suggested that padlocks and keys be given identifying colors, using a different color for each padlock and its companion key. Thus, finding the right key is simply a matter of matching the color of the key and the lock.

Care naturally should be used not to place the paint or color on the part of the key that enters the lock.

W. B. R.

Note: In one town fire department, which was assigned to respond to several factories, and had been provided with keys to fit the different locks in these plants, they had locks and keys colored as above. The keys and colors were listed on small waterproof cards, which were kept on the apparatus due to respond.

* * *

MARK THE CABINETS

One of our "roving reporters" offers this comment, after visiting a number of fire companies that have installed compartmented, enclosed body rescue ladder and other trucks:

Where tools and equipment are stored in cabinets or compartments in all-enclosed apparatus, why not clearly indicate the nature of the contents of the cubicles on the outside cover of each such cubicle, so that a person can quickly locate what is wanted? It is a strange fact, but in too many such modern pieces of apparatus there is no clue to enable the hurried fireman to locate the desired tool, or fitting or appliance.

* * *

DRAIN THE DRIBBLE!

In Larchmont, N. Y., the city service truck carries its booster hose on a reel atop the rig. It was found that all-too-often, after re-winding the wet hose the control nozzle, hanging down, dribbled the residue of the S & A tank on ladders and down into the tool and equipment baskets below.

The trouble was stopped by running a light metal pipe up one side of the truck and over to a small funnel-like opening, into which the nozzle was placed and where it is carried when the hose is not in use. The hose naturally is wound on the reel so that the lead-off end with the nozzle came over the drain pipe. This stunt saves strapping the nozzle.

* * *

OPENING TOP FLOOR FROM ROOF

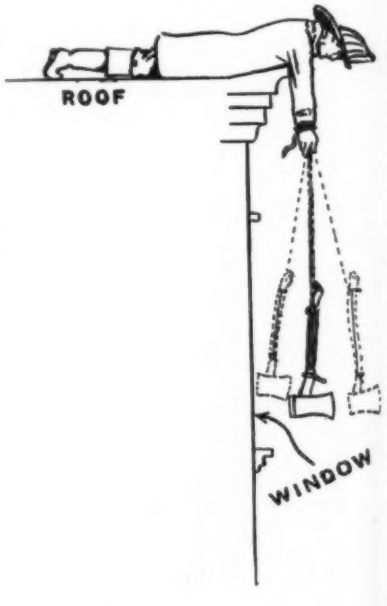
A suggestion for opening top floor windows from the roof of a building where a fireman must improvise a tool comes from Lieutenant William J. Cook, New York Fire Department.

A prescribed method of using a long hook to force down the windows of the upper story of a structure is not always feasible because the fireman may not take a hook or suitable tool with him. More often all the man sent to ventilate the upper stories and roof of a building will have with him is an axe.

Some years ago, ladder trucks in larger cities were equipped with a ball-and-chain window breaker and this implement is still to be found in some fire departments. The trouble with it has been that it is never on hand when it is most wanted, and in addition, it is quite a task to lug it to the roof.

Lieutenant Cook has successfully improvised a window-breaker, by utilizing a regulation axe and either clothesline or radio aerial wire. He says that if the man sent to ventilate will look around he might find a clothesline or radio aerial wire to which he could attach the axe (or other tool) so that he could lower the improvised device over the cornice, drop it to the level of the window, and by swinging it back and forth break in the glass. It might conceivably be used on windows below the top story if sufficient cord or wire were available.

The Lieutenant says further: "I have worked in the Brownsville section of Brooklyn for over ten years (one of the country's busiest fire districts) and have always instructed the men in the truck companies I have been assigned to, to remember this little trick.



For Practical Discussion of Current Fire Department and Fire Management Problems

BOOSTER TANK CAPACITIES

THE discussion in this round table is a continuation of that which appeared in the November issue of FIRE ENGINEERING on booster tank capacities.

The general response from our readers made it necessary to carry the discussion over to this issue.

Readers are invited to send in their comments on this subject or on next month's subject which is described in a box on a following page. Address communications to Round Table Editor, FIRE ENGINEERING, 24 West 40th Street, New York, N. Y.

Discussion of the Topic

Rod A. Porter, Chief, Portage, Wis.: The subject of booster tank capacities for fire apparatus is one for unlimited debate. However, from the standpoint of our own requirements, in a small city located in an area embracing much marsh land and where grass, marsh and brush represent a considerable percentage of our alarms, the following opinions are offered:

For municipal areas we have found our 100 gallon booster tanks are too small. Tanks from 150 to 300 gallons capacity are much more desirable. For rural fire service we operate a four wheel drive type engine with 500 gallon per minute pump and carry 500 gallons of water in the booster tank.

We are convinced that an ideal plan for rural service is to maintain a small (500 GPM) pumper with a maximum of 400 gallons aboard and to provide, in addition, a tank truck with 1-inch or 1½-inch (or both, preferably) hose and a 200-250 gallon power takeoff fire pump which would follow the engine. Capacities of 900 to 1,500 gallons of water we believe to be the proper capacities for the tank trucks, according to the type of territory a department is serving. Steep grades, heavy winter snows and mud will preclude larger capacities, normally; although where roads are paved and access to rural areas is generally over improved highways and other of the aforementioned obstacles are lacking, tanker capacities may be increased to twice the recommended capacities.

The greater distances which rural apparatus must traverse in order to reach the scene of fires, we believe, make it imperative that fire apparatus not be overloaded.

If a fire can not be controlled with 1,000 to 1,500 gallons of water it is doubtful that any amount of water will then be effective upon it and the water will best be used to protect adjoining property in the case of the majority of rural fires and granting that there are exceptions.

A good percentage of grass and brush fires are extinguished, I believe, with booster tank water supplies as this type of fire fighting usually requires the use of brooms, mops, back-pack pumps and burlap bags all of which require little water for effective use. In the case of strictly rural area fires, larger fires and larger areas are generally encountered so that the ordinary municipal apparatus booster tank of 100-150 gallons capacity is oftentimes inadequate.

Upon receiving an alarm outside of our waterworks district we dispatch the rural apparatus, sometimes with a city pumper or truck. We have used ordinary wells with some success but where a fire had attained considerable headway in a property, our own facilities have proved inadequate in other instances. We hope to secure in the future a tanker for joint rural and municipal use.

Farmers are organized in some districts to assist firemen by bringing milk cans full of water to all fires in their locality. In other communities this plan has either not been fostered or it has failed through lack of cooperation by residents of the district. Sometimes private industry such as milk truck operators will fill their tankers and respond to the scene of a rural fire.

Stock tanks and cisterns are particularly good emergency water supplies when they are kept full of water—and when such facilities are available. Creeks, lakes and ponds just never seem to be located near the scene of a rural fire according to our experience.

A small "booster" pump, gasoline engine operated, which can be carried by one or two men and placed at an otherwise inaccessible body of water is carried on some rural apparatus and can be used to fill a booster tank. One-inch suction fittings are sometimes provided, including a strainer of that size for use on a booster hose converted to a suction hose for use in shallow water.

Hard suction hose of 1½-inch diameter which can be used alone or in combination with the large suction hose is provided on our own rural engine.

Summing up the subject of rural fire fighting, I would emphasize the following points:

Provide rural apparatus with large, enclosed type cabs.

Provide plenty of 1½-inch hose with combination fog and straight stream nozzles. (We have used our 2½-inch line once in five years).

Provision for twin booster lines is another consideration which is worthy.

A rural tanker of 1,000 gallons or more water capacity, plenty of 1½-inch hose, back-pack pumps, bags, etc. and booster line and a 200-250 GPM power takeoff pump I believe preferable to a pumper with smaller water capacity and a larger pump where funds are insufficient for both.

Provide adequate personal equipment for rural fire fighters and see that they use it; good electric lanterns, good fire coats with detachable liners, standard lined fire boots and heavy socks, canvas gloves and good fire helmets. Rural fire fighting is often a gruelling task and requires, normally, long dangerous runs, long periods of exposure for the men.

Rural America is just waking up to the benefits of sound rural fire protection planning. I believe that it is the duty of municipal chiefs to foster such a plan in the rural areas around them which do not now have fire protection. By so doing they will be performing a worthy service.

Edwin J. Fraser, Chief, Greece, N. Y.: I feel that all booster tanks should be of at least 200 gallons capacity.

Approximately ninety per cent of our fires are controlled by booster lines.

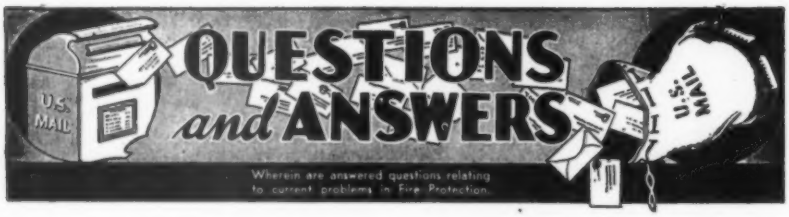
Although we are within reach of municipal water supplies in all sections of our district I might suggest that when two trucks respond to fire, it is always possible for one truck to draft water from wells and streams and replenish booster tank of truck at scene of fire.

All booster lines should be equipped with a combination straight stream and fog or spray nozzle. There are fog nozzles today that operate very effectively with a low pressure pump. The use of fog or spray makes the water go farther and causes very little water damage.

(*Continued on page* 957)

HERE IS THE QUESTION

1. **What, in your opinion, should be the booster tank capacity on apparatus used for (a) brush and (b) rural fires?**
2. **What per cent of fires, (a) brush and (b) rural, are controlled with booster lines supplied only by water from booster tank?**
3. **How is the water in booster tank replenished when operating at fires beyond reach of municipal supplies?**
4. **What special appliances or equipment do you feel are desirable or necessary on these units?**



Ventilating for Carbon Monoxide

To the Editor:

On Page 136 of "Questions and Answers for Lieutenants and Captains," the following statement is made: "In ventilating for carbon monoxide gas (usually found in heavier than air mixtures and heavier than air fumes) ventilation must be provided at the street level or at the lowest point."

On Page 137 of the Crosby-Fiske-Forster "Handbook of Fire Protection," the vapor density for carbon monoxide is given at —.967, while that for air is 1.0. Therefore, carbon monoxide is lighter than air.

1. What causes carbon monoxide to become heavier than air at fires? All things being equal, it would seem that carbon monoxide would become lighter due to its increase in volume and temperature.

2. Is it not carbon monoxide (a product of incomplete combustion) which is found in most cases where back drafts are likely? If this is so, and ventilation is inaugurated at street level or the lowest point, is not the stage then set for a back draft?

F. P. M.

Answer: Carbon monoxide is slightly lighter than air, but it is never found at fires in its pure state. There is always present some carbon dioxide, as well as other gases, which are either heavier than or lighter than air.

If, in a confined room, a mixture of other gases with carbon monoxide were allowed to stand quietly for some time, the carbon monoxide would eventually reach the higher level of the room. However, at a fire in a room, air is not quiescent; the wide range of temperatures within the room cause comparatively rapid movement of the gas and air within the room. Thus carbon monoxide would be carried the same as heavier than air gases by the current created. Theoretically, ventilation would not be provided at the top of the room in such case. Practically, it would be provided at the top for the reason below.

Also, if the air and gases in the room are highly heated, top ventilation would be necessary because the gases upon being heated expand, and are lighter than the air which surrounds the room. Here, an opening at the top would permit the gases to flow out while cold air enters at the bottom of the room.

Were it possible to have a room charged entirely with carbon monoxide, top ventilation would be in order.

Carbon monoxide is a product of incomplete combustion, as you state. Where ventilation is performed on a building containing large quantities of carbon monoxide, and a source of ignition, there would be danger of back draft. For this reason, top ventilation of a building is always the proper procedure. However, where only room is involved, a different situation is faced. It may not be possible in such instance to accomplish ventilation properly and effectively by going to the roof to open up.

Size of Port in Booster Tank

To the Editor:

We have a booster tank 13 feet 11½ inches long, 2 feet 11½ inches wide and 1 foot high. It is made of ⅛-inch thick steel with welded joints and seams. It has eight baffle plates, equally spaced. These plates are welded to the sides and bottom, also scalloped between welds.

We have a 2½-inch connection on the bottom of the tank so that we can fill from the hydrant. Our maximum pressure is 60 pounds. This connection is at the back of the tank, in the bottom.

Could you give us a dimension for a hole which will relieve the water pressure on the tank as an overflow when we fill it, to prevent it from bulging. Also where should this hole be cut on top of the tank?

W. J. R.

Answer: The size of the air escape port of a booster tank is dependent upon the rate at which the tank is to be filled. The booster tank you describe will contain around 260 gallons of water when fully filled. A 2-inch port will prevent a noticeable build-up of air pressure, even if the tank is filled in one minute's time.

Because of the possibility of apparatus being off level when the tank is being filled or when water therein is to be used at a fire, it would be necessary to extend the air vent pipe well above the top of the tank. In such case, if the tank is tipped toward the vent, water will not flow out; furthermore, it would be possible to get more water into the tank when filling, even if it is not on even keel.

With a tank of such great length, and comparative shallowness, it might be even desirable to have vents at each end, and elevate them to such a point that they would not prevent the tank being completely filled even if the truck were not on level ground.

If but one vent is to be used, it would probably be best to place it at one end of the tank. In such case, it would be desirable to have the tank as nearly level as possible when being filled.

Extinguishing Tank Fire

To the Editor:

How would you try to extinguish a tank car fire, or truck fire, were truck is loaded with gasoline, if you had no foam generator, carbon dioxide or similar equipment? This condition exists within the city limits. O. E. H.

Answer: If, as you say, the fire was in the city area, the problem would be a serious one. Even where foam, water-fog and carbon dioxide is available, a gasoline fire of any intensity and volume presents a real problem for the municipal fire department.

The first consideration is the life hazard. If no lives are directly endangered, the efforts should be directed toward protecting exposures and preventing the extension of the fire, because you will have no means of easily or quickly extinguishing the burning gasoline.

If the tank car is still on the track and only burning at the dome, streams may be employed to cool the tank and prevent boil-over and resulting spill fire, until a means of extinguishing the vent fire is found. Lines should be stretched, however, ready to cover exposures, and precautions taken to anticipate spill or flow should the tank rupture. The area should be blocked off and additional help summoned as necessary. Foam (and possibly fog equipment) may be secured from neighboring communities.

If the car has ruptured and the contents are flowing, they will naturally seek the lowest level, and follow the grade. If at all possible, extension of the flow should be stopped or diverted by damming. Water streams may be used to sweep the flowing gasoline into ditches or holes but care should be taken to see that the blazing gasoline is not carried by the water into the sewer system or down manholes.

Where the gasoline can be broken up, that is, the volume of burning fluids reduced, the burning period will be shortened and the danger reduced. But care must be exercised to see that the blazing fluids are not so scattered by the hose streams that the fire will be communicated to exposures.

Damming, or sweeping the gasoline into places like open fields or pits, may give you time to get foam and/or fog appliances on the ground and then control and extinguish the fire.

In Gary, Indiana, Chief McCracken used a mechanical shovel to dig a hole into which blazing oil and gasoline was directed. If your tank car is draining down an embankment off the right-of-way, you might be able to dam the ditch into which it will flow and your job then would be to try to protect the poles and wires and any rolling stock on the railroad. Of course, you should ask for and receive the assistance of the railroad in this connection.

In conclusion, we would like to add that if you cannot get fog nozzles into action, water streams should be used with great care. Sometimes a water curtain or "rain" may be developed by directing two or more good streams so they meet or impinge over the hottest part of the fire, forming a spray. The heat will vaporize this and help reduce burning action and intensity.

After the fire is controlled or out, care must be used to prevent a rekindle or explosion of any vapors.

FALSE ALARMS

What the Postwar Fire Chief Will Wear, Inspired by a Recent Round Table in FIRE ENGINEERING

Talking Horse Story

An inebriated gentleman lurched, grabbed a lamp post, swung around it three times and came to stop face to face with a milk wagon horse.

"Drink too much?" the horse inquired casually.

The drunk stiffened, hardly believing his ears. "Did you just speak?" he inquired.

"Sure," the horse drawled, "been talking ever since I quit winning races back thirty years ago."

"Lord," the drunk mumbled to himself, "a talking horse! I can make a fortune! I'm a rich man!" . . . To the horse he said: "Tell me about yourself."

For fifteen minutes the horse gave him a complete picture of his life. The drunk was more amazed than ever. Finally the milkman appeared.

"I'll buy your horse!" the drunk roared. "I'll give you $1,000 for him. Now! On the spot!"

"Humph!" snorted the milkman mounting the wagon. "Did you fall for that stuff about him winning the Derby too?"

Clarified

Someone had wired a government bureau asking whether hydrochloric acid could be used to clean a given type of boiler tube. The answer was: "Uncertainties of reactive processes make use of hydrochloric acid undesirable where alkalinity is involved.

The inquirer wrote back, thanking the bureau for the advice, saying that he would use hydrochloric acid. The bureau wired him: "Regrettable decision involves uncertainties. Hydrochloric will produce submuriate invalidating reactions."

Again the man wrote thanking them for their advice, saying that he was glad to know that hydrochloric acid was all right. This time the bureau wired in plain English:

"Hydrochloric acid," said the telegram, "will eat hell out of your tube."

Farmer Corntassel retired and moved to Buffalo. In the morning, after spending the first night in the new home, his wife said: "Well, Pa, hain't it about time you was gettin' up to build the fire?"

"No, sirree," replied the old gent, "I'll call the fire department. We might as well get used to these city conveniences right now!"

—Selected

Poet's Nook

There was an old fellow from Sidney
Who drank till he ruined a kidney
It shriveled and shrank,
As he sat there and drank,
But he had a good time of it, didney?

The jury found the defendant guilty of burglary. "Have you anything to say before I sentence you?" asked the judge.

"Only that I'm not guilty," replied the defendant, "and that I object to being identified by a fellow who had his head under the bed covers all the time that I was in the room."

Caution

The theater was crowded and a devoted young couple had been forced to accept single seats. The young lady didn't like the arrangement and looked about for some way to remedy matters. Then it occurred to her that her neighbor might be willing to exchange seats with her boy friend.

So she leaned over and whispered: "Pardon me, are you alone?"

The meek little man gave no sign of having heard. She repeated her question a little louder.

At that the man turned slightly toward her and keeping his eyes on the screen murmured between clenched teeth:

"Hell's fire—cut it out, will you—my whole damn family's here!"

"Why all the bandages on Jones' head?"

"Rotten bridge."

"Break through?"

"No, trumped his wife's ace."

"You'd better jump out of the window," said the lady to her visitor, as she heard her husband approaching. "Oh yeah!" was the reply, "You know that this is the thirteenth floor, don't you?" "Well," spluttered the lady, "this is certainly no time to be superstitious."

Illegal Hunting

"Now, then," asked the lawyer, "have you legal grounds for wanting to annul your marriage?" The youth stammered. "Yes, yes, I was shot out of season."

"I Keep Telling Them the Building's on Fire But They Think I'm Just One of the Party!"

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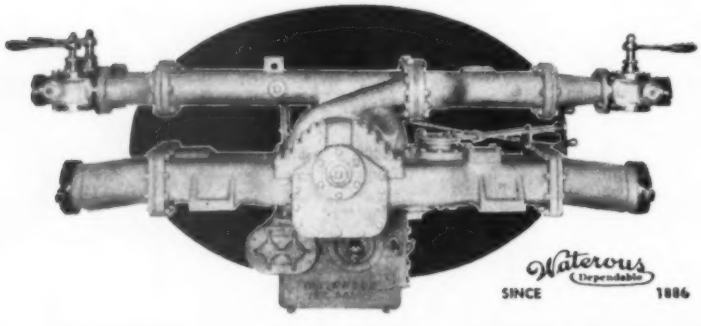

WATEROUS FIRE PUMPS

The German Fire Engine Industry

(*Continued from page 921*)

to report, Storm Troopers drove German civilians away fom this bridge at the point of guns when the civilians tried to persuade the Storm Troopers that it was useless to destroy bridges now that the war was lost anyway.

The future of fire engine manufacture in Germany is, of course, highly questionable and the complete destruction of the Carl Metz plant together with the fact that it is within French occupied territory, would appear to render resumption of operations by that institution highly problematical. The Magirus plant, on the other hand, is well within American occupied territory and it may be possible that particularly their justly famous power-operated aerial ladder may at some future date be manufactured again.

Review of State Firemen's Laws

(*Continued from page 922*)

The question presented the Court was whether these firemen were entitled to recover compensation under the Fair Labor Standards Act for overtime while they remained in firehouse subject to call while reading, listening to the radio or playing cards.

The higher court held in the affirmative. One fireman was allowed for overtime compensation of $505.67 and liquidated damages of $505.67 and $600 for attorneys' fees. The other was allowed overtime of $943.07; liquidated damages, $943.07, and attorneys' fees of $650.

It is certain that when the evidence proves that a municipal fireman, or official, has been illegally removed from office and his salary was paid to another who was illegally appointed in his stead, the former may with justification resort to a court for relief.

For illustration, in Spencer v. City of Peoria, 54 N. E. (2d) 845, reported June, 1944, it was shown that a person named Spencer had been a member of a municipal fire department for approximately sixteen years. In 1939 he was examined by the Board of Fire and Police Commissioners for the office of First Assistant Fire Marshal, and he passed such examination. He was appointed and confirmed to this office and continued to serve as Assistant Fire Marshal up to and including May 6, 1941, on which date a new municipal mayor was elected. The inaugural ceremonies for the incoming mayor were held on that evening. A change took place that night in the offices of Chief Fire Marshal and First Assistant Fire Marshal. Spencer was told that he would have to see the new Mayor and the Board of Fire and Police Commissioners, because he could not be placed without orders either from the Commission or the Mayor. It was admitted that no charges were ever preferred against him and no claim was made that he was suspended or removed from office by the Board of Fire and Police Commissioners, as required by a state law. Repeatedly Spencer requested the newly elected municipal officials to reinstate him and finally he sued the city and asked the court to compel the new officials to reinstate him and pay the salary he would have earned had he not been illegally discharged. The higher court granted this request, and said:

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6. Adjustable to exact, specified frequency. Easy, precise tuning in a hurry.
7. All tuning adjustments are from top of transmitter. Easily accessible. (Remember those times you have had to turn the chassis over?)
8. No high voltage exposed above chassis. All dangerous voltage out of reach. (Many times a slip of the hand might have given you a shock.)
9. Provision for two-frequency operation. Useful when you want to switch over from talking between car and station to talking between car and car (and in lots of other ways).
10. Single control cable—also accommodates receiver. One cable, instead of three or four, running from front of car to rear. Simplifies installation and maintenance.
11. Mobile cables equipped with separable connectors. Add flexibility in operating equipment. Equipment removable without using special tools. All cables plug in and lock.
12. Chassis readily detached from base. Easier to inspect and service.
13. Single-unit construction saves space.
14. Easy to install. Mounting hardware supplied. Comes complete, down to bolts and nuts.
15. Start-stop switch on chassis to facilitate adjustment. (Think how much better this is than having to go up front and press a button to turn on the transmitter.)

New FM 26-42 MC (Mobile or Station) FM Receiver Features

1. Superior adjacent-channel selectivity. You hear the station you want to hear.
2. Low spurious response. Won't pick up unwanted signals.
3. Excellent stability over wide temperature range. Variations in temperature have minimum effect on operation.
4. Single-unit construction. Fewer interconnecting cables. Easier to service.
5. Easy to install. Mounting hardware supplied. Comes complete, down to last nut and bolt.
6. Chassis readily detachable from base. Easy to remove for inspection and servicing.
7. Mobile cables fitted with separable connectors. Cables plug in and lock. Require no special tools. (Another important point—you can't plug in the wrong cable!)
8. Low battery drain. Less battery servicing.
9. Class B output tube saves power on standby. Output stage takes very little power except when signal is being received.
10. Provision for carrier-operated relay. Can be used to operate other circuits for auxiliary signalling—turn on light, ring bell, etc.—or operate retransmitting equipment.
11. Single crystal. Eliminates potential trouble with matching crystals.
12. Attractively styled. And we mean darned good-looking.

RCA

Buy Victory Bonds

RADIO CORPORATION OF AMERICA

RCA VICTOR DIVISION • CAMDEN, N. J.

In Canada, RCA VICTOR COMPANY LIMITED, Montreal

Here is new Fire Department Radio that is different

—AND HERE'S WHY!

• Yes, different! Different because it tunes easier, sounds better, clearer — is more selective, more stable — requires fewer adjustments, less maintenance — and can be serviced more easily, more quickly, more simply.

If you have anything to do with fire department radio or administration, you need to know about this new equipment.

A special illustrated bulletin gives full description. A copy will be sent you promptly on request. Asking for it places you under no obligation whatever. Just fill in and mail the coupon below.

Mail this Coupon and get New Bulletin!

For Complete Information, Specifications, Pictures, Diagrams—Use This Coupon

EMERGENCY COMMUNICATIONS EQUIPMENT SECTION
Radio Corporation of America, Camden, N. J.
Please send me complete data about your new FM Radio Equipment for Fire Departments and Police Departments.

Name .....

Title .....

Employed by .....

Street Address .....

City and State .....

101

THE WAR NEVER ENDS
for
INDIAN
FIRE PUMPS!

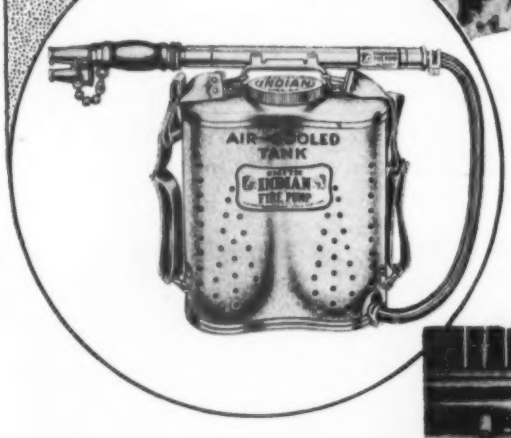


Photo above shows soldiers equipped with **INDIAN FIRE PUMPS** advancing to fight a large fire in Oregon.

Below Truck carrying rack holds 5 gal. tank firmly in place. Buckle may be quickly locked or unfastened for instant use.

Send for Catalog and copies of testimonials

There will never be an armistice with fire. Portable INDIAN FIRE PUMPS are in the first line of defense against the Red Demon. With 5 gal. tanks slung on their backs like Army packs, firemen with INDIAN FIRE PUMPS go into action fast . . . they don't have to stop and pick up the extinguisher as they move about. Remember only clear water is used, no injurious chemicals. NOW is the time to check over your equipment and order for 1946. It is conservative to say that INDIANS alone will handle 70% of your calls.

D. B. SMITH & CO.
411 MAIN STREET, UTICA 2, N. Y.
Pacific Coast Branch
Hercules Equip. & Rubber Co., 435 Brannan St., San Francisco, Calif.

Send for Catalog

"Under such circumstances, the officer so illegally or wrongfully removed may maintain an action to compel his reinstatement, and recovery of his salary during the period of his illegal removal."

State-Wide Concern

Modern higher courts consistently hold that a state statute providing for firemen's pensions is a matter of statewide concern applicable to all cities within the designated class, whether they be home rule cities or not. See Axberg v. City of Lincoln, 2 N. W. (2d) 613, 615, 141 A. L. R. 894. The effect of such law is that a firemen's pension law, as a state law, controls all municipal action. And, furthermore, a fireman who serves the number of years specified by a state law, which makes him eligible to a pension, may either "retire", "quit", "resign", "withdraw" or otherwise disconnect himself from service with the municipal fire department and *always* he is entitled to a pension.

For instance, in State ex rel. Herman v. City of Grand Island et al., 15 N. W. (2d) 341, reported October, 1944, a state law was litigated which provides that whenever municipal firemen have served for the period of twenty-one years they may elect to "*retire*" from active service and go upon the retired list. This state law provides further that such retired fireman shall be paid at least fifty per cent of the amount of salary he was receiving at the time he goes upon such pension list.

A man named Herman on February 8, 1943, the last day of active service in the department, was receiving a salary of $167.50 per month. He had served as a municipal fireman for more than twenty-one years.

The city officials contended that Herman did not *retire* from active service for the reason that *after* he "quit" the city fire department he obtained employment in a fire department at an army air base. In other words, the city officials contended that Herman was not entitled to a pension as assistant fire chief because actually he did not retire from the municipal fire department but simply "quit" to obtain employment elsewhere. Notwithstanding this contention the higher court held that Herman was entitled to a pension. This court said:

"Such fireman's election to retire from active service is optional on his part, but when exercised by him every prerequisite of the statute is complied with, and his right to a pension under existing law is perfect, whereupon it becomes the statutory duty of the city to put him upon the retired list and pay the pension to which he is lawfully entitled."

Also, see the leading higher court case of State Haberlan v. Love, 145 N. W. 1010, 1013, Ann. Cas. 1915D, 1078. Here it was shown that a fireman had served for more than 21 years. During the trial involving a pension he testified, as follows: "I just quit."

In this connection, the court said:

"Did Haberlan (fireman) retire? Haberlan resigned. His resignation was an election to retire, and the Standard Dictionary defines 'retire' to withdraw from active service. . . . To separate or withdraw."

And again in State v. Mayor, 4 Neb. 260, the court said:

"It would seem conclusive that this court has held specifically that to quit, resign, separate, or withdraw, and re-

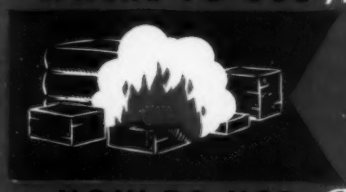
Protector

PUMP TYPE EXTINGUISHER

FLOODS FLAME

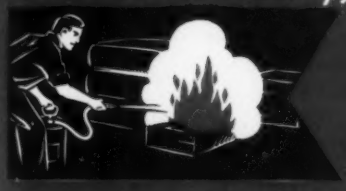
A steady stream of water, projected by Protector's double acting pump, has an effective range of 45 feet. Protector provides 5 gallons of cooling, fire-quenching fluid—yet is easily portable and extremely simple to operate. When used with anti-freeze charge will operate efficiently in temperatures as low as 45° below zero. Patented Safety Phlare design assures new pump action at all times.

WHERE TO USE Protector



Underwriters' approved for Class A fires in wood, textiles, paper, rubbish, and similar materials.

HOW TO USE Protector



Hold firm with foot pedal. Direct nozzle with one hand and operate pump with other. Drench area.

Remember—you need fire extinguishers in your home and that hard-to-replace automobile.

Let General Protectioneers prescribe the right extinguisher for your every fire hazard.

IF IT'S GENERAL IT'S DEPENDABLE

THE GENERAL DETROIT CORP.
2270 E. JEFFERSON AVE., DETROIT 7, MICH.
Distributors in principal cities
CHICAGO DALLAS NEW YORK
West Coast Affiliate: The General Pacific Corp.
Seattle • LOS ANGELES • San Francisco

SAFER BECAUSE OF BALANCED WEAVING

Circular creel feeds cords to one of Eureka's Multiple-Weaving Looms. This specially designed loom gives to the jackets of Eureka Fire Hose the perfect balance *essential to uniform high quality.*

In fire hose, *balanced weaving* is a factor of prime importance. It eliminates excessive writhing, twisting and elongation when hose is subjected to pressure at the scene of action.

Eureka's *BALANCED WEAVE* results in a stronger . . . safer . . . and more trustworthy hose for use under the most hazardous conditions.

"For greater protection to life and property"

EUREKA FIRE HOSE

Division of United States Rubber Company

EUREKA

1230 SIXTH AVENUE · ROCKEFELLER CENTER · NEW YORK 20, N. Y.

fire with respect to the identical law here involved, means exactly the same thing."

For the benefit of readers who desire to read many and various phases of litigations in this general classification the higher court cases are listed, as follows: Haberlan v. Love, 89 Neb. 149, 34 L. R. A., N. S., 607, Ann. Cas. 1912C, 542; Pierne v. Valentince, 291 N. Y. 333; Stiles v. Board of Trustees of Police Pension Fund, 281 Ill. 636; McBride v. Allegheny County Retirement Board, 330 Pa. 402; Bausewine v. Philadelphia Police Pension Fund Ass'n, 337 Pa. 267; Mathewson v. Board of Trustees, 226 Iowa 61; State ex rel. Beronio v. Pension Commission of City of Hoboken, 129 N. J. L. 557; Beronio v. Pension Commission of City of Hoboken, 130 N. J. L. 620; and Roddy v. Valentine, 268 N. Y. 228.

A. & P. Warehouse Explosion

(*Continued from page* 924)

and police telephone communications systems.

Investigations Started

E. L. Reynolds, A. & P. vice president in charge at Newark, promised an investigation to determine the cause of the explosion. Fire Chief Burnett and Police Chief Sebold said they would also investigate into the case and request the building department to determine whether the undamaged portion of the warehouse is in danger of collapsing. Prosecutor William A. Wachenfeld ordered the county electrical, refrigeration and building departments to investigate and assigned Captain Joseph Coccozza and Detective Edward Hartnett of his staff to the case.

What's Burning

THE following list includes fires of $10,000 loss and over in the United States and Canada, for the month of November, 1945.

Month Ending November 30

Clatskanie, Ore.—Consolidated school house destroyed.

Fort Wayne, Ind.—Bldg. occupied by Aro Transformer & Electric Corp. and Natl. Mfg. Co. plant.

Crystal Falls, Mich.—Two bldgs. occupied by Cheney-Fazette restaurant, Selmo bar and bowling alleys of Dominic Selmo and apartments destroyed.

Nashville, Tenn.—C. L. Liggett & Son Feed Co. destroyed.

Los Angeles, Cal.—Leighton Hotel damaged.

Havana, Ill.—Havana Theatre and adj. grocery store destroyed. Bonfire.

Boston, Mass.—Four-track railroad bridge of western route of Boston & Maine's Portland division, across Mystic River from Somerville to Wellington section of Medford, destroyed.

Dover, N. H.—Elks bldg. damaged.

Bayonne, N. J.—A 35,000-barrel oil tank at plant of Standard Oil Co. of N. J., destroyed.

Columbus, Ohio—Grain elevator of Gwinn Milling Co. plant, damaged.

Youngstown, Ohio—Veterans of Foreign War bldg. destroyed. Cigarette.

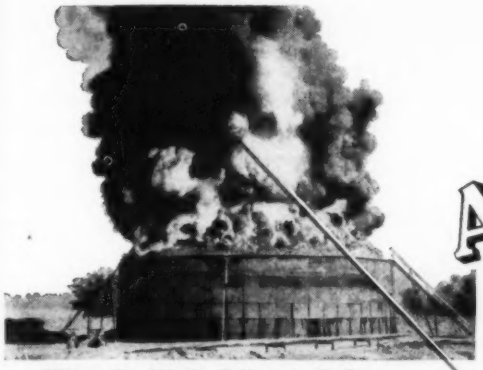
Vancouver, B. C.—Vancouver Apartments dedestroyed. Gasoline explosion.

Waycross, Ga.—Pecan shelling plant of Gulf State Pecan Co. destroyed.

Chicago, Ill.—Armour & Co. glue and soap works destroyed.

Framingham, Mass.—Two warehouses and powerhouse at U. S. Army Engineers Redistribution Center destroyed.

Cincinnati, Ohio—The plant of Cincinnati Sash & Door Co. destroyed.

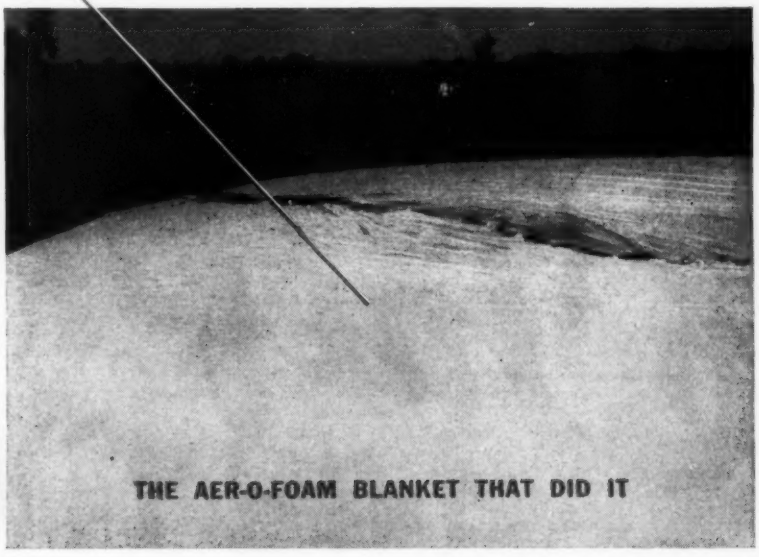


6800 sq. ft. of blazing light crude oil after burning 23 minutes.

AER-O-FOAM Put this Fire Out

Two minutes after Aer-O-Foam was started.

Three minutes later.



Only 375 gallons of Aer-O-Foam liquid were used to extinguish this fire in a 93 foot diameter tank, containing Illinois crude oil to a height of 19 ft. The fire was completely extinguished in a few minutes by applying Aer-O-Foam at the rate of .66 gallons per sq. ft. of oil surface per minute. Aer-O-Foam was applied at two points through National Type "L" Foam Chambers with Moeller Tubes.

Aer-O-Foam, developed by National Foam System, smothers fire with a thick, tough, enduring blanket. Tagged "Bean Soup" by the Navy, Aer-O-Foam does for peacetime industry the same superb job it did in war. It sticks to insulate flame-threatened flat or upright areas—it flows equally well to smother the hottest fires in petroleum, chemical, aviation and other industries.

National Foam, as powder or Aer-O-Foam liquid, fits every industry's post-war budget. Ounces of fire prevention save many million pounds in plants and materials. Foam's gas-tight blanket quickly extinguishes fires, prevents them from spreading, permits no flashbacks.

Don't wait for fire to cancel your peacetime expansion. Wire, telephone or write today to safeguard your progress. Our engineers are yours.

IN FIRE DEPARTMENT SERVICE

National Foam System has equipment especially designed for use of Fire Departments to meet all types of foam fire fighting requirements.

NATIONAL FOAM SYSTEM, INC.

SPECIALIZING IN FOAM FIRE PROTECTION

Packard Building, Philadelphia 2, Pa.

A NAME TO REMEMBER

WHEN YOU THINK OF

DEPENDABLE BRASS GOODS

Chief POWHATAN

WHEN you buy brass goods you are investing in tools that should stand up — take the gaff — for years to come. Hundreds of chiefs specify CHIEF POWHATAN, when they order brass goods, to INSURE getting the kind of brass goods they know they can depend on. Remember to specify — CHIEF POWHATAN.

POWHATAN BRASS and IRON WORKS
RANSON, WEST VIRGINIA
Phones 93 & 94 Charles Town West Virginia
Established 1892

Winston-Salem, N. C.—Gorreall's warehouse destroyed.
Brewer, Me.—St. Theresa's Catholic Church destroyed.
Kawkawlin, Mich.—Plant of Franck Chicory damaged.
Las Vegas, N. M.—Las Vegas high school damaged.
Archbold, Ohio—Sauder Woodworking Co. damaged. Faulty lamp cord.
New Tazewell, Tenn.—The Cawood hotel destroyed.
San Francisco, Cal.—Truck terminal, eighteen Diesel trucks, trailers, equipment and bldg. damaged.
Beulaville, Ga.—Beulaville consolidated school bldg. damaged.
Davenport, Ia.—Diesel towboat, Vagabond, destroyed.
El Dorado, Kan.—Skelly oil refinery still No. 11 and tower, ½-mile south, destroyed. Still No. 9 damaged.
Spokane, Wash.—Home Furniture Co. damaged.
Clyde, Ohio—Steel brick and concrete main plant offices and laboratories of Clyde Porcelain Corp. destroyed.
Los Angeles, Cal.—Mill bldg. of Patten-Blinn Lumber Co. damaged.
Exeter, N. H.—Meras block occupied by Ralph E. Meras Furniture Co. destroyed; adj. Brooks Sporting Goods Store destroyed.
Fairfield, Cal.—No. 2 whse. of Army Air Corps destroyed.
Malden, Mass.—Parochial school of Immaculate Conception parish destroyed.
Cleveland, Ohio—Hower-Langton block occupied by Hoffman Ice Cream Co., Weinberger Drug Co. store, Red Robin Shops, F. W. Woolworth Co. and apartments damaged.
Edmonton, Alta.—Congdon Van and Storage Garage destroyed.
Guelph, Ont.—Bldg. occupied by contents of Bond Hardware Co., Mowats tobacco store, barber shop of Malloy and Finley, Meyers photo studio, and office of E. P. Head, optometrist, damaged.
Carlin, Nev.—Pacific Fruit Express ice storage bldg. damaged.
Schuylerville, N. Y.—Bakery, operated by Julius Keller; Millett Hotel; and bldg. occupied by John Ostrander law office, electrical supply store, barber shop, jewelry store and real estate office damaged.
Port Arthur, Tex.—Three gasoline-filled barges destroyed.
Montreal, Que.—Lumber supply of J. P. Dupuis, Ltd., damaged.
St. Adele, Que.—Four-story Chalet Morlin damaged.
Seaforth, Ont.—Furniture factory of John Boshart & Son damaged.
Flint, Mich.—Maas Bros. women's apparel store destroyed; Neisner Bros. and F. & W. Grand Silver Shop, damaged. Excelsior ignited.
Norfolk, Neb.—Sidles Co., automobile mfrs., destroyed; bldg. owned by Walter Duda damaged.
Philadelphia, Pa.—Industrial Corrugated Box Co. destroyed; Charles J. Smith Co. steel and oil plant, United Stores Co. office bldg. and George D. Wetherill & Co., damaged.
Charlottesville, Va.—Whse. of Charlottesville Hardware Co. and half block on Garrett Street, destroyed.
Seattle, Wash.—Seattle Auto Freight Depot destroyed.
Little Rock, Ark.—Two-story bldg. occupied by Reed Music Co. and Harvill-Byrd Electric Co. heavily damaged. Bldg. owned by Arkansas Foundry Co. damaged.
Reno, Nev.—E. C. Lyon Bldg. damaged.
New Carlisle, Ohio—Barn at W. N. Searff Sons Nurseries destroyed.
Cornwall, Ont.—Knox Church damaged.
Bredenbury, Sask.—Five business bldgs. damaged.
Los Angeles, Cal.—Three bldgs. of Southwestern Fixture & Mfg. Co. plant destroyed.
Oakland, Cal.—Seven shops, 19th Ave. and E. 12th St., destroyed.
Independence, Ia.—Independent Meat & Grocery Co., Schroeder Drug Store and Leytze Furniture Co., damaged.
St. Louis, Mo.—Washington Tabernacle Baptist Church destroyed.
Montreal, Que.—City Wire & Iron Products destroyed.
Anniston, Ala.—First Baptist Church destroyed.
Goshen, Ind.—Business and apartment bldg. occupied by grocery, tavern and bowling alley destroyed.
Erie, Pa.—Tenth Street Methodist Church destroyed.
Rutland, Vt.—Cryphon Bldg., business section, occupied by dept. store and offices, damaged.
Yakima, Wash.—Howson Cabinet & Millwork Co. destroyed.
Hamilton, Ont.—Central Collegiate damaged.
Toronto, Ont.—Security Building occupied by offices, damaged.
Wilmington, Del.—Warehouse leased by Ralston Purina Co., damaged.
Tuscola, Ill.—Old opera house block, occupied by

WARD LAFRANCE for PERFORMANCE

...In the Laramies as at Sea Level

Triple Combination Pumper for Wheatland, Wyoming

QUICK FACTS

Model—75 triple combination pumper
Wheelbase—174 in.
Engine—150 H.P.
Pump—750 G.P.M. 2 stage centrifugal
Length—23 ft. 6 in.
Weight—14,200 lbs. fully equipped. No hose, water or men.
Booster Tank—250 gallons, mounted flat in body

WARD LA FRANCE

Forty-seven hundred feet up, in the foothills of the Laramies, Wyoming, the small community of Wheatland has its own important fire protection problems...vastly different from those of a congested urban metropolis. Yet, both get an exact fit to their needs from Ward LaFrance.

One reason is the completeness of the Ward LaFrance line, which keeps expensive special engineering at a minimum. Another is the basic advantage of the six-cylinder Ward LaFrance engine, which produces peak power from cold starts in any climate.

Our engineers are specialists in fire apparatus. They will welcome your inquiry. Write our Sales Department, describing your community's needs in as complete detail as possible.

GREAT AMERICAN INDUSTRIES, INC.
WARD LAFRANCE TRUCK DIVISION

ELMIRA **NEW YORK**

CRACKERJACK
IS EASIER HANDLING

Well-balanced, easier handling *Crackerjack* Fire Hose means faster action . . . on the ground or on the ladder.

Crackerjack lines are laid and in use in the shortest possible time—and behave well under pressure. This fire hose is built for action—with a laminated, pliable tube that adheres well to the inner jacket; with the outer jacket so applied that balance is retained.

Highly resistant to oil, grease and gasoline, *Crackerjack* Fire Hose is your best investment for long service and trouble-free operation.

The AMERICAN RUBBER Mfg. Co.
Park Avenue and Watts Street • Oakland, Calif.

Classified Advertisements

FOR SALE

One Stutz pumper, 1200 gals. In good shape. New tires, motor in mechanical good condition. Write Chief Roy Elliott for full particulars. Medford Fire Dept., Medford, Oregon.

WANTED

Fire Equipment Dealers to sell Morning Pride protected rubber firecoats, fire pants, fire mitts and fire suspenders.
Write today Morning Pride Mfg. Co., 1986 Home Ave., Dayton 7, Ohio.

CHIMNEY POWDER

No need to send men on the roof for chimney fires. Has-Mor Soot Destroyer not only puts the fire out, it continues to work until it cleans the chimney, making it unnecessary to go back to another chimney fire. Put up in handy packages. Agents wanted. Harry S. Morgan, 62 Broad St., Johnson City, N. Y.

AGENTS WANTED

Agents Wanted to Sell Fire Extinguishers and Fire Protection Equipment for Old Established Company. Good Proposition. SCHWARTZ BROS., Inc., 827 Arch Street, Philadelphia, Pa., Established Over Thirty-Eight Years.

WANTED

Back issues of Fire and Water Engineering between 1915 and 1930; whatever issues available.
Also old photographs or pictures of horse drawn and motorized fire apparatus.
Benedict J. Stevens, 146 Duke St., Kearny, N. J.

POSITION WANTED

Chief Officer, aged 43. Wide professional acquaintance. 17-year background in large city department in extinguishment, prevention, investigation and instruction divisions. Want N. Y. State business connection on part time basis to develop for full time job within year or two. Prefer straight commission. Must have lucrative possibilities. Write Box 95, FIRE ENGINEERING, 24 West 40th Street, New York 18, N. Y.

stores and apartments, downtown section, destroyed.

Decatur, Ind.—Factory bldg. of Bag Service, Inc., destroyed.

Marksville, La.—Roule's furniture store and Charlie's drug store and cafe, damaged.

Howell, Mich.—Dairy barn and milkhouse on farm of Ira Wilson & Son, five miles west, highway US-16, destroyed.

Fremont, Neb.—Main bldg. of Yager Seed & Nursery Co.'s hybrid seed corn processing plant destroyed.

Barrington, R. I.—Combined plants of Newth Rubber Co. and Cummings Tire Co. destroyed.

Knoxville, Tenn.—Thirteen stalls at Forest Avenue wholesale fruit and vegetable market destroyed.

Winchester, Va.—Bldg. occupied by Virginia feed mill destroyed.

San Jose, Cal.—Warehouse of Almaden Vineyards destroyed.

Atlanta, Ga.—Freight terminal of Dean Trucking Lines destroyed. Arson.

Chicago, Ill.—Four Stars Mfg. Co., toy mfrs., destroyed.

Kipling, Mich.—Garage of Stang Lank Line, and factory of Hansen & Jensen Box Co. destroyed.

Cullman, Ala.—Bldg. of Holeproof Hosiery Co. mill destroyed.

Redwood City, Cal.—Litton Engineering & Laboratories Co. plant destroyed.

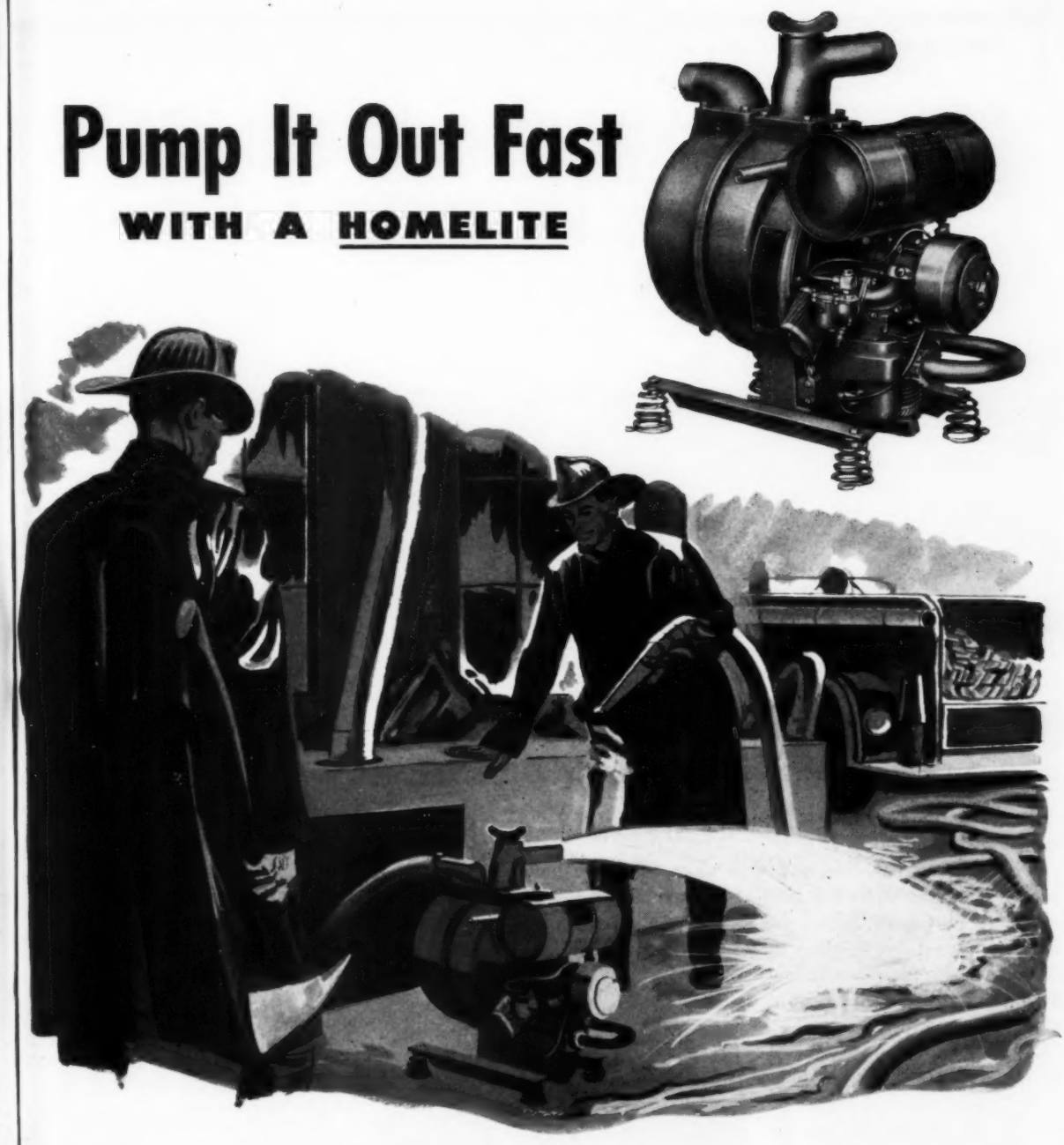
Dexter City, Mo.—Sisler Auto Parts Store destroyed. Adj. furniture store damaged.

Fond Du Lac, Wis.—Du Frame Moving Co. destroyed. Gasoline ignited.

Neenah, Wis.—Turbine bldg. of Bergstrom Paper Co. destroyed. Explosion of turbine feed water heater.

Pump It Out Fast

WITH A HOMELITE



Here's a way to cut down overtime in salvage or overhauling work. Pump out cellars with a fast, self-priming Homelite Portable Pump. Gasoline-engine-driven, it needs no manual attention. Handles 15,000 gallons per hour, doesn't clog, and works in all kinds of weather.

Homelite gasoline-engine-driven pumps are small enough for a man to carry (they weigh only 88 pounds), but big enough for heavy-duty pumping. Moreover, due to the extreme simplicity of the design of these pumps and the special materials that we have put into them, they'll work longer and with less trouble and maintenance. Send for complete information.

Homelite Corporation

Portable PUMPS · GENERATORS · BLOWERS

PORT CHESTER, NEW YORK

We shall appreciate your mentioning FIRE ENGINEERING *when writing advertisers*

Echoes of the War

By Roi B. Woolley

Goodby, Britain, if A-Bombs Fall

Britain was warned in November by a man who saw what the atom bomb did to Nagasaki, Japan, that she faces "total and absolute extinction" if involved in another war.

In a speech at Manchester, England, Group Captain Leonard Cheshire, royal air force observer on the historic Nagasaki raid, said that ending all war is a biological necessity as far as the British are concerned.

The only other safe courses, he said, would be to accommodate the nation's 50 million persons permanently 1,000 feet underground, or to abandon the country and disperse the population throughout the empire.

* * *

Fireman Wins Job Back

Robert P. Huben, first grade New York City fireman, who resigned from the department in August, 1943, because a leave of absence to join the armed forces was refused, was restored to duty in the department, November 16.

Mr. Huben, who was attached to Ladder Co. No. 80 in Port Richmond, Borough of Richmond, New York, before leaving the force, made application for reinstatement upon his return from war duty. He was rejected by the department's medical board, and subsequently brought court action to be restored to duty. The court action was settled out of court after several postponements, Huben's counsel challenging the right of Fire Commissioner Patrick Walsh to refuse to reinstate the fireman.

* * *

Hot Off the News Ticker

According to November reports, atomic bombs now being made in the United States almost certainly will remain here until the United Nations act on proposed world control measures. . . . Just in case you are interested, it is said by Vatican reports that military and civilian dead of World War II totaled 22,060,000. The total of wounded is placed at 34,400,000. . . . Three Americans and 18 Japanese laborers were killed Nov. 22 by an explosion in a small Japanese cargo ship carrying munitions. Presumably the craft struck a mine. . . . Fourteen months after Ramsgate, England, suffered its last shell from the Nazis, the explosion of a mine washed ashore from the windswept English Channel marred the opening of "Thanksgiving Week" blowing out windows in a wide area. . . . It was announced that when a C-47 transport plane crashed and burned near Chateau Thierry, France, 4,000 pounds of soldier mail was burned. Another 8,000 pounds was salvaged. . . . Cargo caught fire and exploded aboard the Brazilian freighter Norte Lloyd. The captain was lost but fifty-six crewmen were saved. . . . It is now disclosed that there was a network of 500 dummy cities, airfields, shipyards and other targets so realistic they blazed at night under enemy attacks and caused thousands of tons of German bombs to drop harmlessly in open fields during the Battle of Britain. . . . An Air Forces warehouse at Fairfield, Calif., containing more than $1,000,000 worth of aircraft parts and plane supplies was destroyed by fire, Nov. 10. . . . Two boys, 13 and 7 years, respectively, were injured when a Jap detonator with which they were experimenting over a gas stove in the kitchen of their home, New York City, exploded. They suffered broken bones, cuts and severe burns. . . . Robert Grimes, South Pacific veteran, raced through a burning rooming house on West Sixty-fifth street, New York City, and aroused most of the occupants, enabling them to flee to safety, only to lose his own suit of civilian clothes and a trunk full of personal belongings.

* * *

Report from Our Antwerp Correspondent

Antwerp harbor, which played a vital part in the liberation of Western Europe and in the invasion of Germany, was subjected to bombardment by flying bombs a few days after its liberation.

The city, which has a population of 500,000 and covers 35,000 acres, received from October 12 to March 28, 1945, 1,218 flying bombs, of which 616 were the V1 and 602 the V2 type. On January 28, 1945, the number of bombs which fell reached 27.

The Fire Brigade and Civil Defense Service, both of which are under the command of Major Ed. Van Cappellen, attended 772 incidents, on 44 occasions being assisted by the overseas column of the British Civil Defense Reserve. The Fire Brigade effectively fought more than 500 fires and accomplished 784 works of evacuation, removing a total of 2,241 injured persons.

Every Chief wants hose that will stand the pressures when action gets at fever heat.

Minutes are valuable and it is very costly to have to remove a bursted section while fighting a dangerous fire.

QUAKER manufactures dependable Quality Fire Hose and millions of feet have been sold to many cities, towns and industrial plants.

Quaker's modern municipal Fire Hose with Easy-Fold construction permits a much "Closer Bend" when packed in the truck bed.

Whether you need 50 feet or 50,000 feet, Quaker is ready to serve you promptly.

Better check your fire hose today. Then let Quaker supply you with their Quality Fire Hose for as many feet as you need to give you adequate protection.

QUAKER RUBBER CORPORATION

Mfrs. Industrial Rubber Products

PHILADELPHIA 24, PENNSYLVANIA

NEW YORK . CLEVELAND . CHICAGO . HOUSTON

Western Territory

Quaker Pacific Rubber Company

San Francisco . Los Angeles

IMPORTANT! NEWS — for every FIRE DEPARTMENT!

M·S·A Announces . . .

THE REVOLUTIONARY M·S·A Chemox SELF-GENERATING OXYGEN BREATHING APPARATUS

Generates its own oxygen as you breathe—in the amounts you need—giving you *one hour's* protection in unbreathable air, using a replaceable chemical canister! Weighs only 13½ lbs. complete. No cylinders, high-pressure valves or fittings. Fog-free lenses. Absolutely simple to use. Proved by Navy battle service all through the war! Write now for Bulletin BM-8, and an actual demonstration.

ONE REPLACEABLE CANISTER DOES THE WHOLE JOB!

AND

THE M·S·A DEMAND-TYPE OXYGEN MASK

Built to high standards of construction and dependability, this extremely simple M.S.A. Oxygen Mask operates on the demand principle—supplying oxygen direct from refillable cylinder, for one-half to one-hour period. No special training required—facepiece has quick-disconnect fitting to conserve oxygen during standby periods—no lens fogging. Write for Bulletin BM-7. Demonstration gladly arranged.

JUST PUT IT ON—OPEN A VALVE—AND BREATHE!

MINE SAFETY APPLIANCES COMPANY

BRADDOCK, THOMAS AND MEADE STREETS PITTSBURGH 8, PA.

District Representatives in Principal Cities

The loss of life in the city as a result of the bombing amounted to 2,951 killed, while the total of wounded persons was 8,699. Works of rescue resulted in saving of 4,000 lives. Among the property damage were 1,700 houses completely demolished, 4,700 so badly damaged as to be beyond repair, with 14,500 seriously damaged and 47,000 slightly damaged.

To fight one fire which broke out in the petrol (gasoline) installations, 8,300,000 gallons of foam were used.

On September 4, the city received the award of the Belgian War Cross with palms, in recognition of the steadfastness of its population during this time of trial.

* * *

Fire Fighting "Made in Japan"

Japanese methods of fighting fires, according to Ferd Lenior, machinist's mate, U. S. N., reminded him of the old Mack Sennet comedies. In a letter to Edward Jordan, secretary to Public Safety Commissioner William Cuthbert, Atlantic City, N. J., he refers to a fire at Yokohama which he and several shipmates helped to fight.

"The men of our crew were off duty, but still aboard ship," he said. "Soon we had three hose lines playing on the fire. Meanwhile, looking down the street, we saw a Jap fire engine racing toward the fire. On the back stood a little Jap cranking a siren for all he was worth. There were no fire plugs around, but a river was only 150 feet away.

"They decided to pump water from the river, and it took them 15 minutes to get the truck in position. But still no water. They finally got the hose wound, but two Japs handling the n zle had to wait for a signal from pump operator, who first had to l down toward the Emperor's palace swearing good faith to give the fire all the water he could to put out the f

"When he started the water, the c nections were loose, and leaked lik sieve. In an hour's time there were of four engines at the scene, and the truck pulled up and promptly ran ou gas. After two hours, with the help our crew, the fire was brought un control. The Jap chief thanked skipper for our help, and said he amazed at the speed with which tackled it." (Thanks, J. Emory Par

Indiana Chiefs Hold Conventi

The Indiana Fire Chiefs Associat held its 1945 State Fire Preventi Convention, November 14, 15 and 1 Indianapolis, with a large attendance state and other fire officers.

This year's presentation of the awa to municipalities, industrial compan and others for outstanding work in prevention was deferred until the spri 1946 convention, which will be held Terre Haute.

Headquarters of the November m ing were at the Hotel Lincoln, wher number of leading manufacturers fire-fighting equipment and appara had displays.

President Forrest Laufraw called assembly to order after which Rob Hamm, Association Chaplain, delive the invocation. Members of the dianapolis official family and dis guished guests were then introdu after which Arnold Renner, Michi State Fire Marshal, delivered address.

Other speakers on the two-day b ness program included: Thad P Protection Engineer, Western C ridge Company, East Alton, Ill., wh subject was "Plastics in the Post Wa Mr. Emmet Cox, Western Actua Bureau, "Fire Protection in the Nati Chief Frank McAuliffe, Chicago Sal Corps, told about his bombing st trip to Europe; Joe Lump, Fire C Carnegie-Illinois Steel Corporation, cussed "Industrial Fire Preventi Roi B. Woolley, Assistant Editor, ENGINEERING, talked on "New Probl Facing the Fire Service"; Major L S. Green, Chief, Fire Prevention Bra Office Chief of Engineers, "Fire-Fi ing Methods in the War Departme the Hon. John Hampton, Mayor, of Muncie: "Relationship and Coop tion Between City Officials and Chiefs."

The afternoon of November 15 devoted to the memorial and patri dedication services, in the Auditorium the Indiana War Memorial, and demonstration by the Indianapolis Department, Harry H. Fulmer, Chie

New Officers Elected

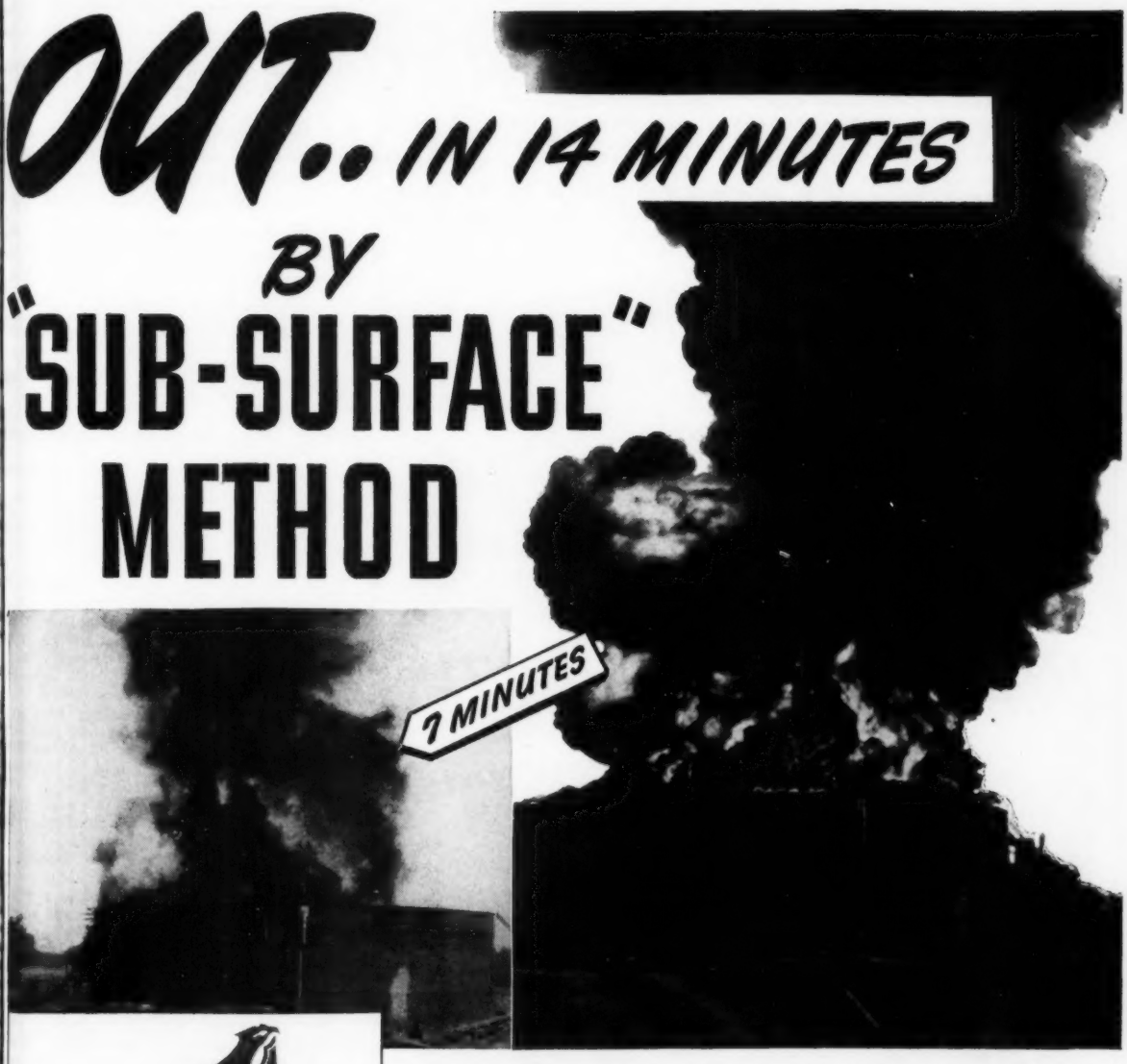
Officers elected to serve for the co ing year were: Chief Harry H. Fulm president; Chief Fred Goeglein, F Wayne, vice-president; Chief W Koerner, Lafayette, second vice-pr dent; Chief Archie McCabe, secreta and Chief George Hanen, New Alb treasurer and Robert Hamm, Chap Frank Orr, business manager of Association continues as heretofore.

ACME TYPE "FD" FULL VISION
ALL-PURPOSE GAS MASKS ARE APPROVED
BY THE U. S. BUREAU OF MINES

WRITE FOR ILLUSTRATED FOLDER and PRICES

ACME PROTECTION EQUIPMENT COMPANY, INC.
Manufacturers
1616 LIBERTY AVENUE Cable Address ACMEPROCO PITTSBURGH, PA. U.S.A.

OUT.. IN 14 MINUTES BY "SUB-SURFACE" METHOD



MEARLFOAM-5

U. S. Navy test on 93′ diameter blazing tank shows . . . "SUB-SURFACE" Method of foam applications kills gasoline fires—when properly engineered foam liquid is used.

MEARLFOAM-5 was successfully employed at this U. S. Navy test at Findlay, Ohio in July 1945. The multi-protein, blended foam-producing liquid is the same dependable mechanical (air) foam liquid supplied to the Navy for shipboard and shore base fire-fighting during wartime—and now supplied to the Navy for peacetime protection.

Ask for condensed data sheet describing the properties of this war-born fire-fighter that yields the live, lasting, fire-resistant (air) foam. *Technical assistance available.*

Completely safe and non-corrosive—may be used with standard Mechanical Foam-Forming Equipment

★ ★ MEARLFOAM-5, in pre-mixed solutions with hard or sea water, will not form any objectionable precipitate on long standing.

FOAM ON FIRE OUT... Stays OUT!

THE MEARL CORPORATION
153 Waverly Place, New York 14, N.Y.

The Round Table

(*Continued from page* 939)

We recently responded to a fire which had gained considerable headway in a blind attic. The flames were shooting through the roof. This fire was extinguished with booster line equipped with low pressure fog nozzle and water damage was practically nil.

E. W. Steinbeck, Chief, Bloomingdale Volunteer Fire Department, Bloomingdale, Ill.: I believe that a 1,000 gallon booster tank should be the minimum for fire equipment intended for rural and village departments called upon to serve where standpipe water supply is not available.

From my twenty years of experience, I would say that a very satisfactory percentage of our fires are effectively controlled with that amount of water, considering the circumstances, of course.

To replenish supply for booster tank, a portable pump unit of a capacity large enough to maintain two 1½-inch lines should be regular equipment.

Connection should be provided so that a water supply may be replaced while mounted pump supplies service lines. A portable unit is a great advantage as often water reservoirs or streams are not easily accessible with heavy equipment.

H. L. Sindle, Chief, Little Falls, N. J.: In my opinion the booster tank capacity on any truck used for brush and rural fires should not be less than 250 gallons. With this capacity, ninety-five per cent of all brush fires encountered could be extinguished. Also if the department is active and gets the proper start, seventy-five per cent of the rural home fires could be held in check until water could be supplied in some other manner if possible.

I would say that fifty per cent of all brush and rural fires are controlled by booster tank alone.

In our town we are fortunate enough to be able to replace our water by running back to the nearest hydrant. However, in rural towns which have no hydrants, lakes, rivers, brooks, nor ponds, there should be a truck in service all the time to respond to all alarms. This truck should be of not less than 2,500 gallons capacity. Necessary fittings should be regular equipment. All apparatus should use siamese fittings from truck and carry extra lengths of booster hose on the tank truck ready with nozzle attached. Several small streams of water will put out a lot of fire if properly handled.

W. L. Banker, Chief, Fairfield, Ill.: We have only one pumper that is equipped with a booster tank. As it is of only 100 gallons capacity it is not suitable for rural or brush fires. The pump cannot be operated when the truck is in motion.

However, we do have here quite a few tank trucks which are used for hauling water and oil in the oil fields in this locality. These trucks carry 1,000 gallons of water and are equipped with a small rotary pump for filling. The pumps are driven by power take-off gear and can be operated when the truck is being driven. One man can drive and another handle the nozzle, thereby covering a field fire without delay.

Craig C. Shurtleff, Chief, Mt. Morris, N. Y.: I believe booster tanks for fighting brush and rural fires should be of 400 gallons capacity.

Only about eight per cent of our

HERE IS THE QUESTION FOR THE NEXT ISSUE

1. **What fire prevention measures, if any, are taken to protect Christmas crowds in stores and other places of public assembly?**
2. **Have you used, and found effective, radio and newspaper for warning the public against holiday hazards?**
3. **What other means do you employ to guard against fire and life loss during the holiday season?**
4. **How effective have they been?**

NOW! FOG AT 60 LBS.

The UNIVERSAL NOZZLE

COMBINATION FOG AND SOLID STREAM

UNIVERSAL APPLICATION
RUGGED CONSTRUCTION
PRECISION MACHINED

STREAMLINE DESIGN
HIGHLY EFFICIENT
EASY TO OPERATE

WRITE US FOR THE NAME OF YOUR NEAREST DEALER

MANUFACTURED AND DISTRIBUTED BY
L. N. CURTIS AND SONS
5812 COLLEGE AVE. • OAKLAND 11, CALIF.

THIS MIDWESTERN OUTFIT POPULAR WITH FIREMEN EVERYWHERE

2 Piece combination SUIT

• RUBBER OR CANVAS

The Coat... Flexible elastic inner sleeve for wrist to keep out water, cold and sparks; adjustable collar strap, detachable wool lining, Midwestern Safety snaps, two outside pockets, 6-inch storm flap and many other fine Midwestern qualities.

The Pants... These Midwestern Bunker Plants are equipped with a removable wool lining which has safety snaps that cannot catch on anything. Sturdy construction, reinforced crotch for pole sliding. These pants together with coat illustrated above are Midwestern's outfit No. 101.

FIREMEN like this Special Combination Suit for many reasons: Detachable wool linings; flexible elastic inner sleeve for wrist to keep out water, cold sparks; exclusive Midwestern Safety Snap, and many other outstanding features. Midwestern garments are favored by the larger municipal departments throughout the country.

REGULAR FIREMAN'S BOOTS NOW AVAILABLE

Fireman's boots ¾ length, reinforced instep, felt linings. Do not confuse these boots with reclaimed boots which have been offered firemen for past 2 years. These are regular fireman's boots made of the new synthetic rubber. Write.

MIDWESTERN PROTECTIVE CLOTHING

MIDWESTERN MANUFACTURING CO.
MACKINAW, ILLINOIS

FIRE CHIEFS ALL OVER THE WORLD

have had an opportunity in recent years to see Midwestern garments in use, and we are making connections now for export trade.

See your Midwestern Mfg. Co. representative for catalog and prices, or write the factory.

fires are controlled with booster lines because the present booster tanks are too small.

I would like to see booster tanks of from 400 to 600 gallons capacity and high pressure fog of from 600 to 800 pounds utilized for rural fire fighting. It would be very efficient, if fire trucks in the future could be so constructed that ordinary pressures (75-150 pounds) as well as high pressure (600 to 800) fog were available.

William Wiedenhoeft, Chief, Geneseo, Ill.: I believe the capacity of the booster tank should be at least 400 gallons. Ninety-five per cent of our brush and rural fires are controlled with water from booster tank.

We have had wonderful cooperation from people with cars, bringing with them loads of water in milk cans. We have also had them bring barrels of water on trucks. We really have saved homes with their help.

I believe rural units should be equipped with 2½-inch flexible suction hose with quick attachment that can be put into a tank, ditch, cistern or well, as we have used them all. I believe that two booster lines should be used, one for inside fire fighting and one for roof, attic or outside. I would suggest a combination straight stream and fog nozzle. We have done wonders with spray.

We have only one booster line, so five times out of ten must connect leader line which takes too much water and thus must be used sparingly.

George Apgar, Chief, Bernardville, N. J.: I believe the capacity of a booster tank for fighting rural and brush fires should be 500 gallons.

All our brush and rural fires are controlled by booster lines until other water is found.

We replenish tank from brooks, river or lakes.

We include ten back pack pumps on our rural fire unit and have found them to be very useful.

E. McFarland, Chief, Bradley, Ill.: In my opinion the capacity of a booster tank used for fighting rural and brush fires should be 500 gallons.

About 25 per cent of the brush fires and 75 per cent of rural fires in our town are controlled with booster lines.

The tank is replenished by pumping out of cattle water tanks or wells.

I believe 200 feet of 1½-inch hose and fog nozzle are necessary equipment on these units.

C. L. Lindros, Chief, Farmingdale, N. Y.: Although our trucks carry 250 and 300 gallon booster tanks, I believe 500 to 1,000 gallons should be used.

In our department about ninety-five per cent of rural and brush fires are controlled with booster lines.

As no streams or ponds are available in our area we must return to the last hydrant in the district to replenish our booster tank.

I believe brooms, shovels and back pack tanks are essential on rural and brush fire fighting units.

Arthur P. Panels, Chief, Rumson, N. J.: I believe the capacity of the booster tank on a brush fire fighting truck should be 150 gallons; on a rural unit the capacity of the booster tank should be 400 gallons.

Ten per cent of our brush fires are fought with booster lines and all our rural fires.

The booster tank is refilled from ponds, wells, ditches, etc.

E. C. Beecher, Chief, Milltown, N. J.: I believe the booster tank capacity should be 500 gallons. About 75 per cent of our rural and brush fires are fought with booster lines. Booster tank is replenished by bucket brigade from nearest well or pond.

I believe swatters, brooms, shovels, etc., should be included in the equipment of a booster truck. When it is impossible to fill the booster tank by means of buckets, a small portable tank with open head such as a 50 gallon iron drum can be used by attaching a small hard rubber suction hose to pump and inserting suction end of hose in the drum. The bucket brigade relays the water to the iron drum.

Richard D. Quinn, Chief, Livingston, N. J.: I can only tell of the experiences in our town. I believe a booster tank of 200 gallons capacity is suitable for fighting rural or brush fires.

About one hundred per cent of the brush fires in our town are fought with booster lines. We do not use booster lines on rural fires.

The booster tank is replenished by pumping from wells, cisterns, ponds and brooks.

We use a spray nozzle on our booster line and feel that it is a "must," using less water and doing a better job. I believe back pack pumps

Gee, I'm sure glad you ordered—

BODY-GUARD BUNKER SUITS

Many a fire chief concerned with the health of his men have ordered or recommended "Body-Guard" Bunker Suits — so thousands of firemen have been wearing them daily for over twenty-five years. These garments keep them dry and comfortable at every fire, and they cost so little.

Since the war has terminated we are again in full peacetime production and we now can make immediate deliveries—Any fireman can have a catalog by writing—

BODY-GUARD MANUFACTURING CO.
ST. JOSEPH, MISSOURI

Speaking of Experience - -

PRICE LISTS AND SAMPLES FURNISHED ON APP
Samuel Eastman & Co.,
MANUFACTURERS OF
THE STANDARD
TRADE MARK.
THE BEST & THE CHEAPEST
For Fire Service
in America.
Get The Best,
The Concord Hose.
UNRIVALED & UNEXCELLED
FOR
Durability,
Reliability,
Economy.
Read our Treatise on Fire Hose and learn that Seamless, woven and leather hose, were both invented in 1672. Leather soon supplanted fabric, and still leads. Who are the old fogies?
OAK LEATHER HOSE.
For Prices of Hose and Supplies, address SAMUEL EASTMAN & CO., East Concord, N.H.

In 1824 this

organization entered the fire field. The clipping above appeared in the first issues of *Fire Engineering*. Some years later, we dropped leather hose and nozzles for metal. We were one of the first firms in this country to make available efficient fire fighting nozzles, siamese, deck guns and other fire fighting products. This is the fourth war we have participated in. Never before have we been more ready to serve nor more willing. Every effort is directed toward an early victory — and will remain so until our boys come home.

When it's over, over there — and here — all the experience and skill of our men and women will be directed toward giving you fire chiefs the finest fire fighting products money can buy.

Nothing takes the place of Experience

SAMUEL EASTMAN COMPANY, INC.
CONCORD, N. H.

Since 1824

We shall appreciate your mentioning FIRE ENGINEERING *when writing advertisers*

should be included for getting at inaccessible places. A supply of good brooms should also be included.

Our town is fairly well covered with hydrants and we have a good supply of hose to reach most houses, barns and outbuildings.

LaMar Whewell, Chief, Norwood, Pa.: The booster tank capacity for units used in fighting brush fires should be at least 250 gallons. For rural fires, it is necessary to have as large a tank as it is possible to mount on the equipment.

Brush fires as a rule can be controlled in this area with from 100 to 150 gallons of water. Beyond our municipal supply we use a creek or the river.

We have found fog nozzles on both booster and 1½-inch and 2-inch lines most effective on all the fires in this area.

Edward A. Buschker, Chief, New Milford, N. J.: For brush fires a booster tank of 150 to 200 gallons is sufficient. For rural fires a tank of 1000 to 1500 gallons is necessary.

We use booster lines in about sixty per cent of the brush fires in our community. We can reach every emergency in town from the public supply. Our longest stretch is 1200 feet from hydrant.

On a few occasions where there is no public water supply, we took water from a hand pump in the well.

At times a smaller suction hose, say 2½-inch hard suction, would be easier to lower into a well or cistern. We have 5-inch suction hose and to lower it into a well or cistern is too much work just to fill up the booster tank.

Fred W. Beneway, Chief, River Edge Fire Co. #1, River Edge, N. J.: I believe a booster tank of 200 gallons capacity should be used on apparatus for brush fires; for rural fires a 1,000-gallon tank should be used.

We in River Edge Boro control all our brush fires by booster. We have no extreme rural condition.

Tanks are refilled from streams.

All I believe necessary in the way of special appliances is a fog nozzle on a 1½-booster line.

* * *

The following replies are in answer to a previous round table on choosing a chief for his experience:

Edward J. Hart, Chief, Endicott, N. Y.: I believe the Board of Fire Commissioners are using good judgment in asking for the appointment of a younger man.

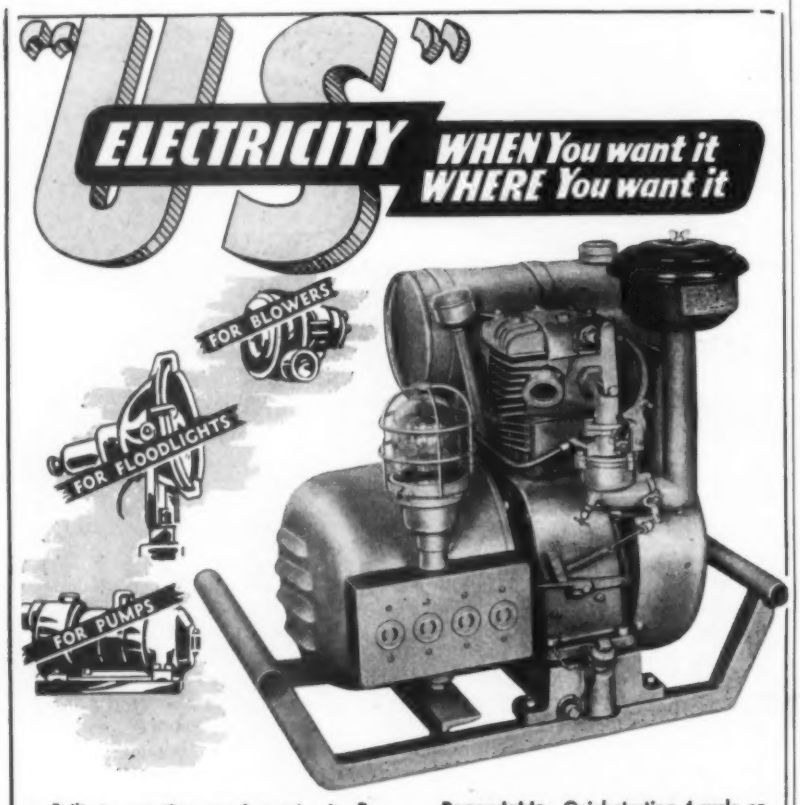
I don't believe any man sixty years old or past has the physical strength to head a fire department. There are many reasons. You will find that ninety per cent of the cities and villages are handicapped with older fire chiefs and in many instances the fire departments don't progress. For the good of the fire service it is necessary to have young men for fire chiefs who are willing to work and fight for the betterment of the department and for the interest of the taxpayer. In other words, you must sell your fire department to the public. To keep up with modern times you need new and improved equipment, up-to-date training schools, intelligent men, higher salaries, shorter hours, etc. Let's pass a federal or state law whereby we will have to retire at the age of fifty-five and give the up and coming young men a chance.

I believe the solution in this case is to restrict the examination to the members of the department only. A man from the ranks who can qualify should be given a chance.

Herbert Stutz, Chief, Pitsburg, Ohio: It seems to me that the fire commissioners are acting very unwisely in setting up such rules for an examination for chief. I would think that the long experience of the acting chief would outweigh the limitations of his age.

I believe the Board of Fire Commissioners should suspend the rules and allow him to take the examination. Since this man has spent the best years of his life in working up to acting chief, he should have the honor of being chief of the department bestowed on him. This man has a wide experience and should profit by being appointed chief.

F. A. Northcutt, Chief, Covington, Ky.: It is my belief that in selecting a chief of fire department the most important thing to think about is the experience he has in fire fighting. Certainly he has gained this experience through a period of years of service and that also must be considered. I am sure that a man from the ranks would make a more efficient chief than someone that has had no experience whatsoever in fire fighting.



Built to exacting requirements—to fire department specifications. . . . Designed to stand up under the hard usage and difficult conditions a Fire Department Portable has to meet! In service with leading fire departments, these rugged 1500 watt Units have *proved* themselves capable of meeting every emergency.

Dependable. Quick-starting 4-cycle engine. Positive lubrication.

Start it and forget it! Automatic voltage regulation under all loads. No adjusting necessary. No fussing to mix gasoline and oil.

Compact. An easy load for two men.

Larger and smaller sizes available. Write for further information.

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Atlas Engine Co.	Houston, Texas; Salmon Bay Terminal, Seattle 99, Wash.
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Clark Supply Company	245 E. Keefe Ave., Milwaukee 12, Wis.
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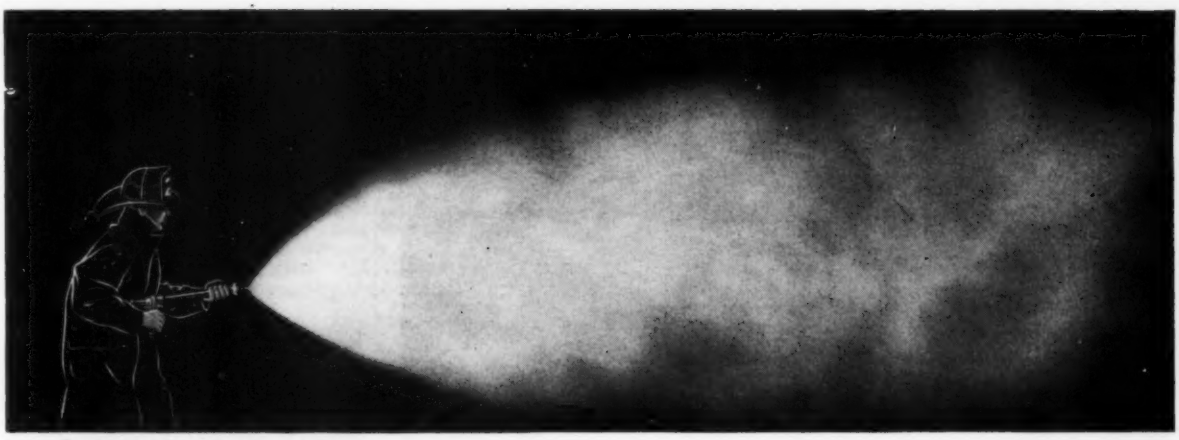
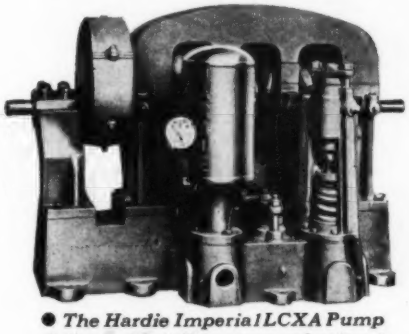
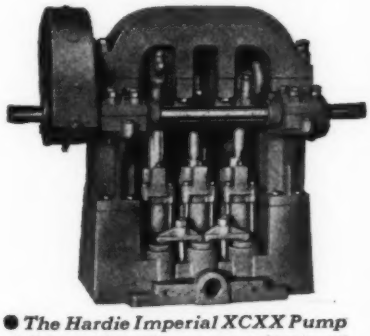
ARMY (E) NAVY



● *The Hardie Fog Gun delivers a true fog, or a hard driving stream, or a combination of both as desired. One hand trigger control.*



● *The Hardie Imperial LCXA Pump delivers 50 gallons per minute at 800 P.S.I. at 130 R.P.M.*



● *The Hardie Imperial XCXX Pump delivers 35 gallons per minute at 800 P.S.I. at 118 R.P.M.*

800 P.S.I. *Plus . . .*

When you specify a Hardie High Pressure Big Capacity pump for your Fog Fire Fighter you get 800 P.S.I. plus a number of other things that assure complete and lasting satisfaction.

Hardie pumps deliver 800 P.S.I. at slow speed, easily and without excessive strain on any part. This means dependability in long sustained operation, slow wear, long life and freedom from service troubles.

Hardie pumps and Fog Guns are supplied by leading manufacturers of fire control equipment. Specify a Hardie pump when you buy your new Fog Fire Fighter or convert an old unit into one. Write for catalog and complete data.

THE HARDIE MFG. COMPANY

Hudson, Mich. **Los Angeles, Calif.** **Portland, Oregon**

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High Pressure **PUMPS AND FOG GUNS for Fog Fire Fighters**

A BUCKEYE EXPANDER
Does More Work!
FIRE Departments: The simplicity and economy of the BUCKEYE Expander increases your efficiency. With a simple change of segments, only one BUCKEYE Expander is necessary for hose sizes from ¼" to 3" inclusive. By turning the handle in the opposite direction, you automatically release segments so that hose and coupling can be removed without any damage. BUCKEYE—it's just the Expander you've been looking for!
Buckeye
FIRE DEPARTMENT ACCESSORIES
BUCKEYE IRON AND BRASS WORKS
DAYTON 2, OHIO

HOWE Can Supply Rotary, Centrifugal or Piston Type Pumps
Established 1872
HOWE FIRE APPARATUS COMPANY, 1402 West 22nd Street, Anderson, Indiana

Manufacturers' Announcements

(*Continued from page* 936)

New Principle in Flexible Tubing

A new type of flexible tubing, non-collapsible under plus or minus pressures, and retractable to about one-eighth its extended length, is announced by the Warner Brothers Company, Spiratube Division, Bridgeport, Conn., for portable or semi-permanent ventilation or any handling of air, gases or light solids.

Section of Spiratube Flexible Tubing. Such Sharp Turns Are Made with Only Slight Reduction in Free Air Area

Spiratube, as it is known, has had wide use in the U. S. Navy and has been given a thorough trial in industry. It is reported to lend itself admirably to use in the fire service in connection with smoke extracting equipment.

New M.S.A. Protective Mask

The Mine Safety Appliance Company has announced its M.S.A. Chemox Oxygen Breathing Apparatus, a radically new development in respiratory protection.

The mask, which was perfected shortly before Pearl Harbor and early adopted by the U. S. Government, underwent continuous Navy battle service during the conflict. It employs a replaceable chemical canister, generates its own oxygen, giving the wearer one hour's protection against unbreathable air. It weighs 13½ pounds, complete, and is said to be ideally suited to the requirements of industry and fire departments in meeting any emergency where high concentrations of poisonous gas or oxygen deficiencies are encountered.

The M.S.A. Chemox Self-Generating Breathing Apparatus and its operation is described in detail in a new bulletin BM-8 available upon request from Mine Safety Appliance Company, Pittsburgh, Penn.

Da-V-Lite Portable Power Unit

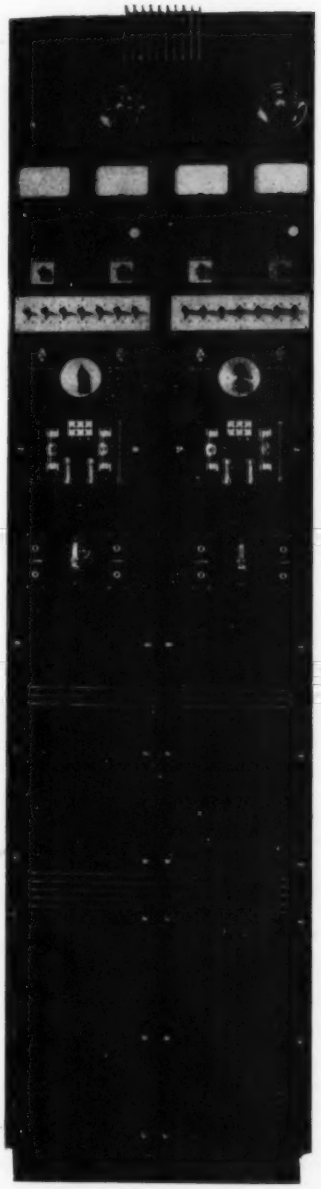
The use of portable power and lighting units by the fire and emergency services will show a substantial increase in the post-war years ahead.

Even before the war, the value of these utility units had been demonstrated and accepted by metropolitan fire departments. The war further proved their efficacy, both for day-by-day regular use and as stand-by equipment.

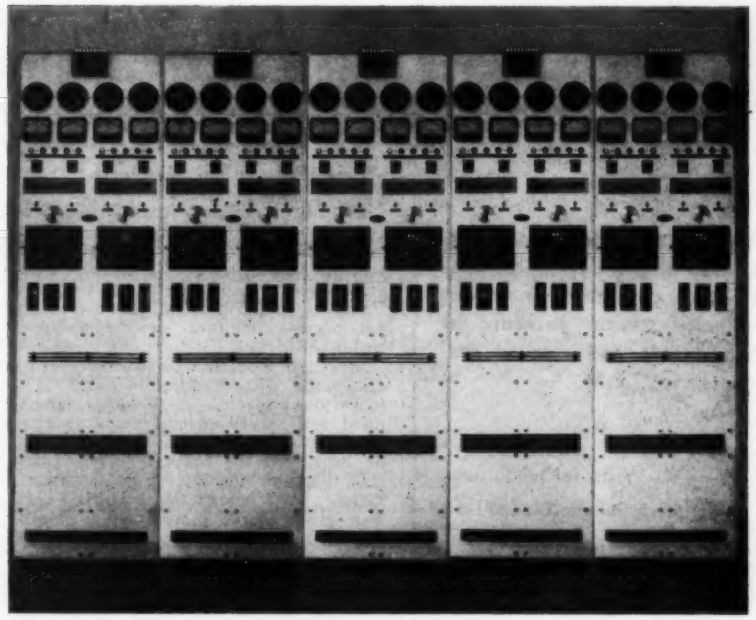
A newcomer to the fire service is the Da-V-Lite portable power unit manufactured by the Davey Compressor Co., Kent, Ohio, and distributed nationally by Westinghouse Electric Supply Company.

Streamline

with A-B-C FIRE ALARM T-E-L-E-G-R-A-P-H SWITCHBOARDS



Why buy three devices when one will do the job faster, more reliably, and more economically? The A-B-C Fire Alarm Switchboard is a complete Fire Alarm Central Station within itself, compactly arranged in a smartly designed cabinet 15″x24″x90″. Each switchboard is capable of handling two circuits; and when your system increases, additional switchboards may be added as shown. The A-B-C Fire Alarm Telegraph System contains the most modern, up-to-date Fire Alarm equipment on the market today.



Full particulars gladly furnished without cost or obligation.
We invite your inquiries.

SOUTHERN SWITCH & SIGNAL CO.
SHREVEPORT, LOUISIANA

ECONOMIZE

WITH

NOZZLE PRESSURATERS

By

INCREASING PUMPER EFFICIENCY

•

PROTECT YOUR FIREMEN FROM AVOIDABLE ACCIDENTS CAUSED BY EXCESSIVE NOZZLE PRESSURES

The Nozzle Pressurater installed at the engine instantly and accurately measures velocity stream pressure at the nozzle and rate of discharge in G.P.M.

•

Write for
Descriptive Bulletin No. 171-1

•

Attention Manufacturer's Representatives. Your territory may be open.

Write to:

BARTON
INSTRUMENT COMPANY
2306 East 38th Street
LOS ANGELES 11, CALIF.

Rockwood High Capacity Waterfog Nozzle

To provide water fog in volume for controlling fires in buildings and flammable liquids, Rockwood Sprinkler Company, Worcester, Mass., has introduced its Type B 500 GPM "High Capacity" Waterfog Nozzle.

Type "B," 500 GPM High Capacity Nozzle

The new nozzles are reported to meet the requirements of the U. S. Navy which has them in service on special fire fighting vessels that travel with fleet operating units.

The Type B nozzle discharges 500 GPM at 110 PSI in a full-bodied pattern having a normal range of 60 feet, at 100 PSI.

This type nozzle may be effectively used on turret deluge guns.

R. D. Van Houten Joins Fire Appliance Co.

President Gordon F. Hurst, of the Fire Appliance Company of San Jose, California, announces that R. D. Van Houten has joined the general management staff, as vice-president and general sales manager of the combined operations of Fire Appliance Co. and Campbell and Budlong, Inc.—a recently purchased agricultural sprayer manufacturing firm.

Mr. Van Houten was for many years associated with Remington-Rand, Inc., in various capacities in the sales department and served several years as vice-president. In 1933, with H. E. Ingram, he organized the Sales Analysis Institute, a nationwide sales training organization. Just before Pearl Harbor, Mr. Van Houten was summoned to Washington to assist in conversion of all Remington-Rand plants to war operations. On the completion of this task, he became the general sales manager of International Latex, which position he held for the two years prior to accepting his present post.

A New Saw-Gun

New improvements are reported to have been made in the Saw-Gun, a portable power saw and file, operated by electricity, air or flexible shaft. It will utilize an ordinary hack-saw blade.

Information on these developments may be obtained from Mid-States Equipment Corporation (Saw-Gun Division), 2533 East 73rd street, Chicago 49, Ill.

HYDRANTS VALVES and Pipe Line Accessories

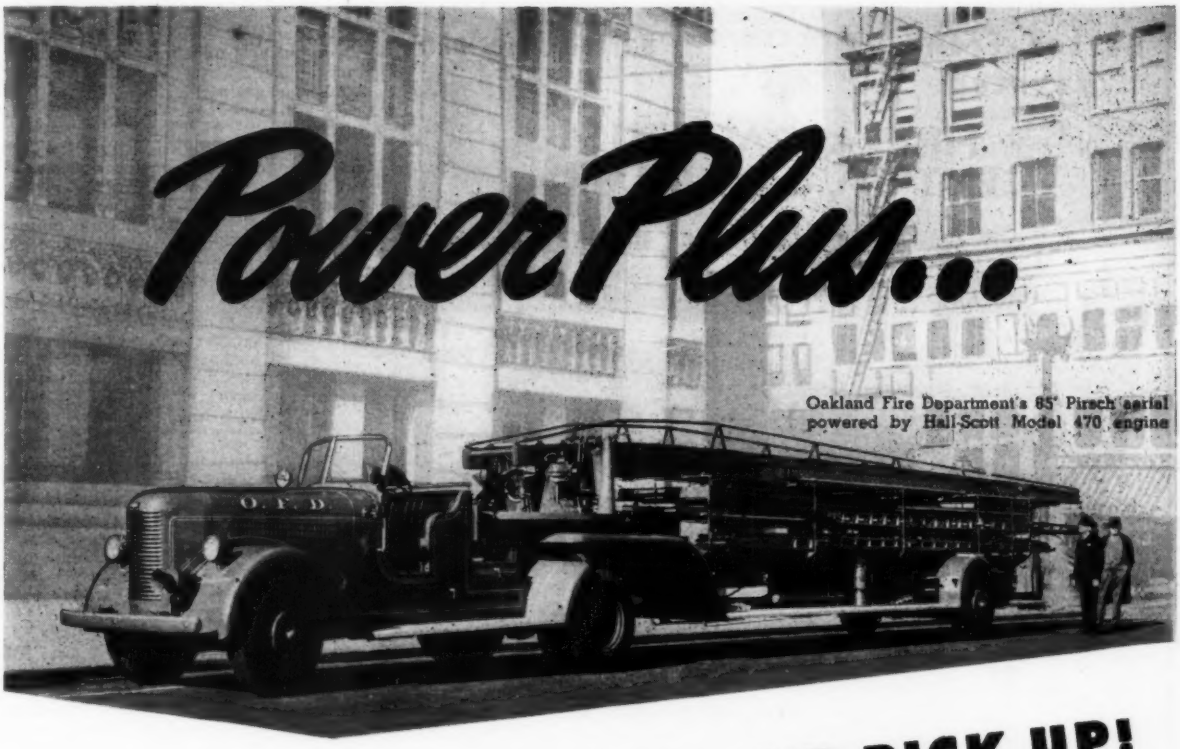
A. W. W. A. HYDRANTS
Underwriters Approved

Conform to American Water Works Association specifications. Approved and listed by Underwriters' Laboratories and Associated Factory Mutuals. Well known and widely used for many years.

SPECIAL TRAFFIC MODEL (shown at right) is designed to yield at ground line under impact, repair being simply renewal of breakable bolts and breakable coupling on stem. Dry top, revolving head, easy to lubricate. High efficiency because barrel diameter not reduced and there are no working parts or obstructions in waterway.

VALVES: A. W. W. A. types, iron body, bronze mounted with double-disc parallel seat or solid wedge type. Non-rising stem, outside screw and yoke; or with sliding stem and lever. Also furnished hydraulically operated. Square Bottom type operates in any position. All are rugged and dependable, made of best material with highest quality workmanship.

M&H VALVE
AND FITTINGS COMPANY
ANNISTON, ALABAMA



Oakland Fire Department's 85' Pirsch aerial powered by Hall-Scott Model 470 engine

FOR HILLS, PUMPING AND PICK UP!

For acceleration up the grades and after traffic slowdowns . . . for pumping 24 to 48 hours *steadily* . . . only *top* power can give *top* performance!

This power is yours in a 400 Hall-Scott which can handle a 2000 gallon pumper without strain yet weighs only 2190 pounds and is compactly "streamlined" to fit under most present hoods. The Hall-Scott 400 series engines develop from 250 to 300 B.H.P. at speeds below 2200 R.P.M. — a vital factor in extending motor life.

With a dependability that matches their power, the new Hall-Scott 400 has proven itself over hundreds of thousands of miles of mountain roads without a single major failure. All engine dimensions are held to tolerances approximately one-half those generally used. And last but not least, unit assembly design permits a part to be shop-serviced while a duplicate is *in* the engine and *out* fighting fires!

HALL-SCOTT MOTOR CAR COMPANY

Factory and General Offices: 2850 SEVENTH STREET, BERKELEY 2, CALIF.
Factory Branches: SEATTLE, WASH. • LOS ANGELES, CALIF. • NEW YORK CITY
Division of ACF—BRILL MOTORS COMPANY

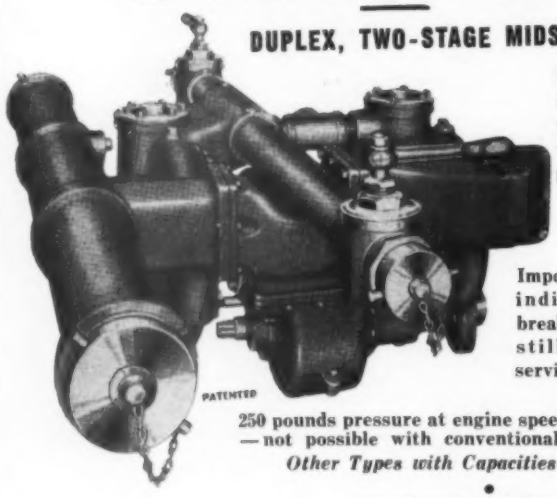
Barton-Front Mounted

AMERICAN-MARSH PUMPS

Barton-American Midship

FIRE APPARATUS CENTRIFUGAL PUMPS

DUPLEX, TWO-STAGE MIDSHIP MOUNTED



High Pressure performance entirely unaffected when unit used to pump gritty water.

•

Impellers mounted on individual shafts—breakdown of one pump still leaves one for service.

•

250 pounds pressure at engine speed equal to 30 M.P.H. —not possible with conventional two-stage pumps.
Other Types with Capacities to 750 G.P.M.

•

WRITE FOR BULLETIN 8731F

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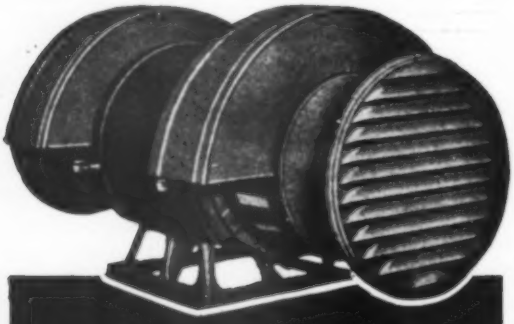
AMERICAN-MARSH PUMPS, INC., Battle Creek, Michigan
Pumps — and pumps only — since 1873



STERLING MODEL "M"
GENERAL ALARM SIREN
You Can Depend On It ALWAYS

An absolutely dependable, tried and proven siren for communities of all sizes. Loud, clear, simple to instal and no maintenance to bother with. Embodying the "know how" of the oldest and largest makers of siren signals in the fire field. Write for descriptive literature and list of towns using the model "M".

ALSO
manufacturers of a complete line of apparatus sirens.
Write for literature.

STERLING SIREN FIRE ALARM CO., Inc.
55 Allen Street Rochester, New York

New Circul-Air Hose Drying Manual

Announcement is made by The Circul-Air Corporation, 6330 East Palmer avenue, Detroit, Mich., of a new booklet captioned "Hose Drying Manual" which will shortly be ready for distribution.

The booklet will illustrate and describe in detail the construction and operation of the new Circul-Air "Detroiter" model C-500 Dryer. Those interested in hose drying equipment should find the informative data on hose drying which is contained in this literature to be very helpful.

The Circul-Air Corporation through Mr. C. T. McGraw, president, reports 1945 has been the best year in the history of its business and that for 1946 it is stepping up its sale promotion and engineering work.

Kaar Engineering Adds Three Representatives

Three additional sales representatives have been appointed to handle the Kaar line of emergency radio telephone equipment, according to an announcement of Norman C. Helwig, sales manager of Kaar Engineering Company, Palo Alto, California.

They are Irving I. Kahn & Co., 3324 Main street, Hartford, Conn., which will serve the New England states; Mr. Jack Weber, 114 Liberty street, New York City, who will cover the eastern part of New York, eastern Pennsylvania, New Jersey, Maryland, Delaware and Washington, D. C., and Mr. C. E. Moore, 3118 Linwood Boulevard, Kansas City, Mo., who will represent Kaar in western Iowa, Missouri, Nebraska, Colorado and Kansas.

The Kaar firm recently announced the addition of 50 and 100 watt instant-heating mobile FM transmitters and a companion FM receiver to its line.

Fire Organizations Increase Meetings

Following some relaxing of ODT regulations on travel, and the end of gasoline rationing, the fall brought a renewal of meetings, conferences and conventions of fire service organizations. The following were recorded as we go to press:

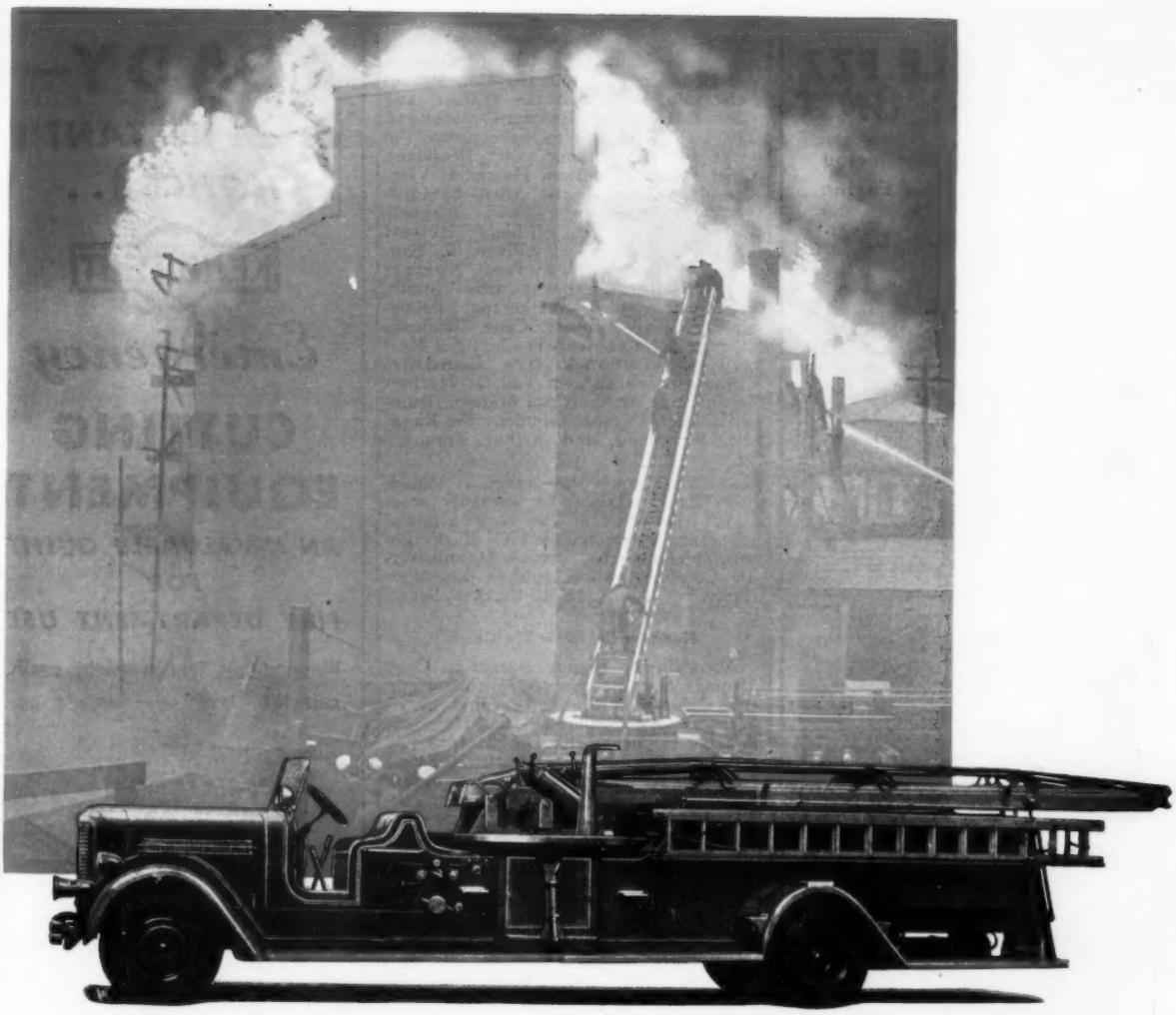
Western Penna. Firemen's Training Institute

The school committee of the Western Pennsylvania Firemen's Training Institute report that a very successful school was held the week of September 3 to 7, inclusive, at State Teachers College, California, Penna.

This school is sponsored by the Southwestern Pennsylvania Fire Chiefs and Asst. Chiefs Assn. under the direction of the Department of Public Instruction of Penna., according to Henry Neill, Secretary. There were 46 fire departments listed, with an attendance of 188 firemen; also 14 exhibitors and a number of out of state trainees, news representatives and others.

State Assn. of Fire Chiefs of Maine

The Quarterly meeting of the State Association of Fire Chiefs of Maine was held at Harrison, Me., Tuesday, Octo-



PIRSCH FIRE APPARATUS IS USED BY AMERICAN INDUSTRY

The Pirsch Quintuple Aerial Ladder Truck featured above is serving one of America's most important war and peacetime industries.

This truck is equipped with the Pirsch Patented Hydro-Mechanical Hoist and 65' aerial ladder, two stage series parallel 750 gallon per minute centrifugal pump, 600 gallon water tank, 1000' 2½" hose capacity body with ladders, pike poles, ladder pipe and other equipment. A very compact and efficient unit.

Consult Pirsch for facts about quality fire apparatus.

PETER PIRSCH & SONS CO. KENOSHA, WIS.

BUILDERS OF AMERICA'S FIRST ALL-POWERED AERIAL LADDER TRUCK AND AMERICA'S FIRST 100' AERIAL LADDER"

NEW HALE FZZ PUMPING UNIT

With a Direct-Connected 4-Cycle Air-Cooled Engine

- READY FOR USE
- RUGGED
- POWERFUL
- PORTABLE

Available with Built-in Foam Proportioner.

Pumping Fog and Solid Stream Through 1½" Lines

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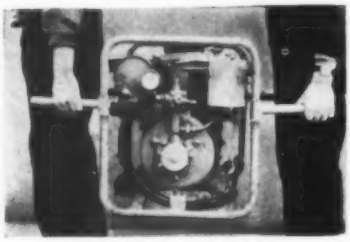

Can Be Easily Carried or Wheeled on Floor.

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Here's a pumper every Fire Company should own—the new Hale Model FZZ. It's ideal for use with booster streams, fog or liquid foam (Foam proportioner is built in). Can be mounted on apparatus, making it possible to fight fires from moving equipment. CAPACITY: 60 Gallons per minute at 90 lbs. pressure; 150 G.P.M. at 30 lbs. pressure.

Write for FZZ Folder

HALE FIRE PUMP COMPANY

CONSHOHOCKEN, PA.

Fire Pumps in All Standard Capacities

ber 9, at the American Legion Hall, that city.

Vice-president, Chief Clifford Denison presided. Roy E. Johnson Ch., Bd. of Selectmen, welcomed the visitors, and Chief Dol Mercier, Rumford, responded. The following officers were elected to serve for the coming year: President, Chief Clifford Denison, Harrison; Vice-President, Chief Curtis Allen, Sanford; Secretary-Treasurer, Ronell Birknell, Norway; Directors: Chiefs Herbert Constantine, Bangor; Oliver T. Sanborn, Portland; Giles F. Frost, Norway; Richard Frates, Bath; Guy Smith, Houlton; Harold Wickerson, Brunswick; William Clifford, Cape Elizabeth. The Sergeant-at-Arms is Chief Sol Herman of Westbrook. The Legislative Committee consists of Chiefs; Herbert Constantine, Bangor; Sol Mercier, Rumford; Allen Payson, Camden; Joe Randlett, Richmond, and Arthur Emmons, Saco.

A turkey lunch was served at Woodland Hotel Hall. The speakers were P. C. Charnock of the New England Insurance Exchange and G. E. Ferguson, chief chemist, Pyrene Manufacturing Company, whose subject was "Fire Gases." (R. C. Bicknell. Secy.)

Northern California Fire Chiefs

According to announcements by Chief Thomas M. Lane, Secretary, the Northern California Fire Chiefs met in its first "Victory Conference" at "Hobergs" in Lake County, Calif., on Saturday and Sunday, October 20 and 21. It is reported that the educational program included addresses by a number of outstanding speakers whose subjects covered matters close to both paid and volunteer departments.

The Association's president is Chief Mitchell Terzich, of Sonora.

Fifteenth Annual Florida Fire College

The Fifteenth Annual Florida State Fire College conducted by the State Department of Education in cooperation with the Florida State Firemen's Association, was held in Miami, Florida, November 5 to 9 inclusive, with seventy-five students in attendance.

The unit subjects covered were: Forcible Entry, Chief L. W. Cork; Ladder Practices, M. Q. Bullock; Hose Practices and Salvage, Asst. Chief J. R. Larrabee, and Overhaul Practices, Capt. J. W. Davis. Fire Department Instructors Training was handled by H. T. Hinton; Fire Fighting Tactics by Chief J. B. Chancey. In addition there were a Fire Department Officers Round Table; Fire Department Demonstrations; motion pictures, lectures and Question Box Answers.

Chief Henry R. Chase of Miami was in direct charge of the College, assisted by a large Advisory Committee.

Twelfth Annual Indiana Fire School

The Twelfth Annual Indiana Fire School, conducted by the Indiana Fire Service Training Schools and Cooperating Agencies at Purdue University, Lafayette, Ind., was held October 23, 24 and 25 with a total registration of 280. Mr. Fred Lingo, Director of Indiana Fire Service Training Schools, acted as Chairman.

Speakers and lecturers included: Mr. W. A. Knapp, Associate Dean of Engineering, Purdue University and Chair-

READY—

at an INSTANT'S NOTICE . . .

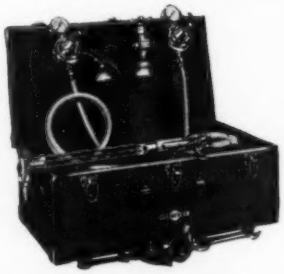
KEROTEST

Emergency

CUTTING EQUIPMENT

AN INVALUABLE OUTFIT FOR FIRE DEPARTMENT USE

Wearing Unit light in weight, easily adjusted, very convenient to use



KEROTEST Emergency Cutting equipment enables you to cut away steel barriers in a few minutes . . . to get to the source of a fire quickly . . . to make a rescue that by any other method of cutting steel would require hours of time. Enthusiastically approved by the country's leading Fire Chiefs.

The entire unit is self-contained, complete with pressure proved cylinders, regulators, hose and non-back-fire cutting torch all comfortably mounted on a special padded vest, ready at an instant's notice.

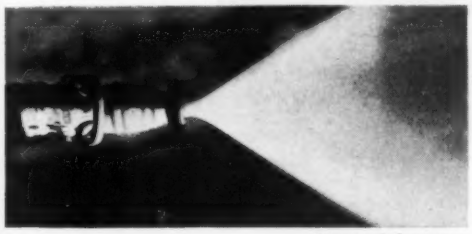
The wearer's legs, arms and hands are entirely free at all times, as all parts of the Emergency Cutting Apparatus are strapped close to the body. Firemen can climb ladders and work in very close quarters without the slightest inconvenience.

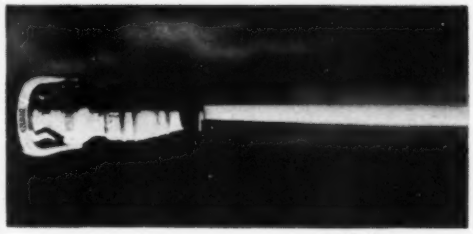
KEROTEST MANUFACTURING COMPANY

PITTSBURGH 22, PENNA.

The Correct Stream FOR EVERY FIRE

Fog
Solid Stream
Water Curtain
SIMULTANEOUSLY
OR
SEPARATELY


Variable Fog


Solid Stream

Water Curtain

YOU GET ALL
EFFECTIVE STREAMS
BY EASY POSITIVE ADJUSTMENT

The Riepling UNIVERSAL NOZZLE

provides quick stream selection by separate shutoff on either straight stream or fog. It eliminates the necessity of carrying extra nozzles or spray tips.

USES LESS WATER

The fog opens at 1° and can be adjusted to a 130° water curtain, with or without solid stream combination at any stage. The opening discharge never impairs vision nor causes severe water damage.

You should know more about the Riepling Universal Nozzle that is now used by many Municipal Departments, and U. S. Coast Guard Vessels, Naval Air Stations and Army Air Fields.

Send for complete description, sizes, and water discharge data.

MANUFACTURED EXCLUSIVELY BY

George E. Sleeper COMPANY

2608 NINTH STREET ENGINEERS BERKELEY 2, CALIF.

FOUR STREAM SELECTIONS • FOGS ON 90 POUND PRESSURE • USES LESS WATER

THE NEW
SAW-GUN
SHOULD BE STANDARD
ON ALL
FIRE-FIGHTING EQUIPMENT

Here's Why..!

The Saw-Gun is a portable power-saw that will quickly cut into all metals, wood and other materials. Quickly attaches to any electric or air drill, and may also be propelled by a flexible shaft. Insert ordinary hack-saw blade for cutting.

Firemen equipped with this handy tool can now get at the fire quickly. Can cut openings into obstructions regardless of their material. Cuts rapidly through heavy gauge steel. No need to waste precious time removing steel gratings . . . cut them out of the way with this amazing portable tool. Does away with slow, cumbersome, dangerous gas cutting torches, together with their long lines of hose and heavy tanks.

Progressive fire-chiefs who know the importance of getting at a fire *fast*—who want a quicker means of getting to entrapped persons, will add the Saw-Gun as standard equipment.

ONLY $42.00
QUICK SHIPMENTS ON AA-5 PRIORITY OR HIGHER

Sold on Money-Back Guarantee

SEE YOUR JOBBER or WRITE DIRECT
Mid-States
EQUIPMENT COMPANY
Saw-Gun Division
2419 S. MICHIGAN AVE., CHICAGO 16, ILL.

man of Executive Board of Indiana Fire Service Training Schools, dean of the State School; Carter Bowser, State Fire Marshal; Matt Daugherty, executive secretary, Greater Lafayette Chamber of Commerce; Richard E. Vernor, Manager, Fire Prevention Bureau, Western Actuarial Bureau of Chicago; Warren Kimball, Associate Editor, "Volunteer Fireman" N.F.P.A., Boston; Wayne Timmons, Public Safety Institute, Purdue; Robert Hamm, Indiana Inspection Bureau; Frances Hartman; Chief John McCracken, Gary Fire Department; Chief Forrest Lawfraw, Goshen; Battalion Chief A. Frank Craig, Indianapolis; R. D. McDaniel, Vice-President, Grain Dealers National Mutual Fire Insurance Co. of Indiana; Captain Raymond Coon, Gary Fire Prevention Bureau; Assistant Chief Mark Brosier, Anderson; Arnold Meister, Chevrolet Division, Anderson; Col. C. F. Cornish, Director of Aeronautics Commission of Indiana; Bert Westover, Director Administrative Council of Indiana; Professor Reed, Agricultural Research, Purdue; Dr. Richard C. Steinmetz, Chief Investigator, Mill Mutual Fire Prevention Bureau, Chicago; Prof. W. L. Gilliland, Chemistry Department, Purdue; Assistant Chief Miles Houghton, Elkhart; Chief Joe Lump, Carnegie-Illinois Steel Corporation, Gary; Hubert Walker, Manager Sales Engineering Department, American LaFrance Corporation; W. A. Ross, Consultant, U. S. Office of Education, Washington, D. C.

Persons in the News

Retirements and Promotions

Officers elected at the two-day conference of the Iowa Firemen's Association in Des Moines were: T. C. Nolan, Emmetsburg, president; Paul A. Soener, Independence, first vice-president; Dean Rodgers, Corning, second vice-president; M. Babcock, Eldora, third vice-president; J. B. Wiley, Mount Ayr, fourth vice-president; L. F. Berry, Ames, fifth vice-president; and H. C. Reinholdt, Manning, re-elected secretary-treasurer.

New officers elected by the Gloucester County Fire Chiefs' Association at its Mt. Royal, N. J., meeting were: George Alrich, Williamstown, acting county fire marshal who has been vice-president of the Association; Albert Held, Mt. Royal, vice-president; John R. Williams, National Park, secretary; Ex-Chief J. K. Tryon, Pitman, re-elected treasurer; Chief Alvah Stiles, Mullica Hill, re-elected trustee.

Darl S. Lawton, Assistant Chief, Sioux City, Ia., Fire Department retired, effective October 1, after serving more than the twenty-two years in the department required for retirement and pension.

Robert L. Hirsch has been appointed Assistant Chief of the Sioux City Fire Department. Chief Hirsch has served seventeen years in the department and fought in both World Wars, being released from the Navy shortly before his appointment to the post of Assistant Chief.

* * *

Fire Chief Jay Collins, Knoxville, Iowa, has retired as head of that community's fire department. His successor is Chief Harry Avery, who entered the

BETTER BADGES
than you ever got before—

For the past 64 years we have supplied the fire fighters of America with the finest badges they have ever worn.

Now—because of the government's prohibition of the use of nickel, brass, copper, nickel plating, and chromium — we are making these badges and insignia in sterling silver, sterling silver gold plated, rolled gold on sterling silver, and 14 karat gold.

Today — for just a little more, you get a sterling silver Braxmar Badge — without doubt the best badge you can buy anywhere.

Recommend Braxmar to all your fellow fire fighters and wear one yourself.

★

The blue covered catalog is the latest published but write for our new price list effective July 29, 1943. Only prices in the catalog on 14 karat gold items are still in effect. All auto plates are discontinued for the duration.

★

C. G. Braxmar Co., 242 W. 55th St., N. Y.
John O. Veit, Pres.

BRAXMAR BADGES
Standard for over 66 years

NEWS YOU HAVE WANTED FOR
machines back to the compan
within a specified period, or else
pay the company $2 a day there-
after for use of the car, up to a
total of $200.
A complaint against R. S. L
Inc.,
who said the company refused to
sell him a car because he insisted
on buying for keeps.
As The
dealers exploiting the
plan sell at the
KLEERLINE
ANFEDO

KLEERLINE COUPLINGS

are AVAILABLE again

FOR MUNICIPAL AND CIVILIAN USE

Now that it's all over, over there, Uncle Sam has given us the go-ahead sign and we have resumed full-time production on KLEERLINE COUPLINGS for your use.

Of course you know KLEERLINE COUPLINGS are streamlined, all arms, lugs and protruding parts have been eliminated, which means they cannot catch on ladders, etc., in fact, they glide right over obstructions and thereby speed up operations when moments are precious.

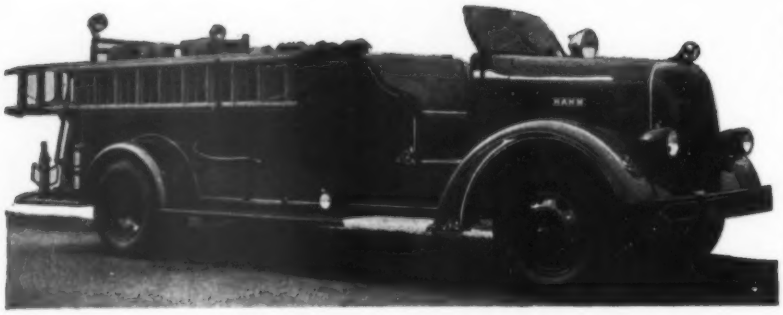
KLEERLINE COUPLINGS stand the hardest knocks because they are built more rugged than old types. Every thread is uniform, simplifying coupling up.

Your dealer will show you many reasons why prudent fire chiefs

★ *Specify KLEERLINE*

FASTER
STREAMLINED
BETTER
MODERN DESIGN

ANDERSON FIRE-FIGHTING
EQUIPMENT COMPANY, INC.
407 WEST 36th STREET NEW YORK 18, N. Y.



"HAHN" FIRE APPARATUS

SINCE 1907

FINEST IN THE WORLD * STREAMLINED * BALANCED CHASSIS * AMPLY POWERED * VERY EFFICIENT PUMPS WITH PLENTY IN RESERVE

HAHN MOTORS, Inc.

HAMBURG, PA.

The Modern All-Purpose Fire-Fighting Tool!

The HUXBAR

This effective new tool was invented by a practical fire captain. His thirty years experience in fighting fires and catastrophies convinced him that the basic safety tools were clumsy and inadequate. From this knowledge he developed the HUXBAR, one tool that would efficiently perform the work of five. Modern in design and practical in use the HUXBAR is useful in any and all emergencies.

Constructed of the finest nickel chromium alloy steel, it has the tensile strength of 175,000 lbs. per square inch, strength without brittleness . . . and carries an unconditional guarantee. The HUXBAR not only fights and controls fires and emergencies, but many users have found it adaptable to their special requirements. Act now to equip your plant, safety squad, fire or police department with the HUXBAR. Price, $15.00.

The HUX-A-MAT

LIGHT WEIGHT FOLDS COMPACTLY TO FIT 28" x 8" CARRYING CASE

The compactness and light weight of the HUX-A-MAT "Fold-N-Bag" stretcher makes it easy to carry and a simple matter to reach the injured wherever they are. The injured are protected from the elements by waterproof canvas, a rubber sheet, a wool blanket, and a linen sheet. Write today for further details on this dependable new-type stretcher. Price . . . $27.50 without equipment . . . $33.50 complete.

HUXEL INDUSTRIES • Safety & Fire Appliances

1000-1002 KEITH BLDG CINCINNATI, OHIO

department with Chief Collins as a private.

Assistant Chief Bill Skeels, Storm Lake, Iowa, Fire Department, has retired after fifteen years of service. He was honored at a special dinner at which he was presented a gold wrist watch by Chief Harold Staunton, in the name of the department. His successor has not been announced.

The Durant Volunteer Fire Department, Durant, Iowa, celebrated its fiftieth anniversary, October 16, with a dinner and special program during which Fire Chief Waldo Horn accepted gifts of flowers from fraternal and other organizations in the name of the department.

Lieutenant Carl Dressen, former New York City battalion chief, who was detailed in charge of fire defense on the German steamship Europa when she was brought to this country, has been transferred to the Navy's Fire Training School, Norfolk, Va.

Commissioner and Chief Patrick Walsh, of the New York Fire Department tendered his resignation to the city's newly elected mayor, William O'Dwyer. Although no announcement has been received from the mayor-elect, it is understood the resignation will be accepted.

Chief John J. O'Doherty resigned effective October 1 as head of the Lorain, Ohio, Fire Department to enter private industry, thus bringing to a close a 36-year career in fire-fighting. He entered the Lorain Fire Department in 1909, at the age of 21. A year later he was promoted to captain and in January 1944, he was appointed chief upon the retirement of Chief Jack Hart.

Chief O'Doherty was active in the fire service of the State and nation. He represented the firemen in the State of Ohio on many committees and was local property officers for the O. C. D. In 1938 he was elected trustee of the International Association of Fire Fighters. He was an active member of the International Association of Fire Chiefs and served on a number of its committees.

Chief O'Doherty has opened his own business office in Lorain—The John J. O'Doherty Company, Inc., with a branch office in Akron. The company will be state-wide agency for fire equipment.

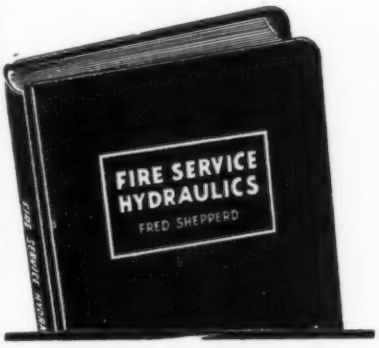
Raymond C. Chase has resigned the position of chief of the Rollinsford, N. H., Fire Department after holding the post for twenty years.

In connection with his career as chief of the department, Mr. Chase had a rather unusual experience. The day that he accepted the position, even before the keys of the fire station had been turned over to him, there was a bad residential blaze which he was called upon to subdue. And to carry out this tradition, only three hours before he was to retire, the department was called to a chimney fire.

Obituary

Deputy Chief Lawrence Edward McGrath, 55, of the New London Fire

You Don't Have To Be An Engineer To Understand



FIRE SERVICE HYDRAULICS

By Fred Shepperd, B. Sc., M. E.

(Editor of FIRE ENGINEERING, *and author of such famous and widely used books as "The Fire Chief's Handbook," "Simplified Fire Department Hydraulics" and others.)*

254 pages, 185 illustrations

CONTENTS

Chap. 1 Principles of Hydraulics

Chap. 2 Suction and Drafting of Water

Chap. 3 Velocity and Discharge
including Nozzle Reaction, discharge tables for all sizes of Fire Nozzles—small to large.

Chap. 4 Friction Loss Calculations
including calculations for all sizes of hose from ¾" to 3½" and tables of friction losses for all sizes.

Chap. 5 Calculating Engine and Nozzle Pressures
including solutions of problems consisting of single lines, siamesed lines, branched lines; a new method for solving problems involving ¾" to 2" hose; also unlined linen hose from ¾" to 3½" diam.; open butt calculations; lines laid up an elevation or down an incline; stand-pipe problems; water tower problems; deck gun calculations; pumpers in relay; Bresnan distributor calculations; fog nozzle calculations; quick pressure calculations; foam stream calculations; dewatering siphon calculations.

Chap. 6 Fire Hydrants and Mains
including friction loss calculations; flow calculations; discharge from fire hydrants.

Chap. 7 Fire Streams
including use of nozzles; range of streams; causes of defective streams; proper placement of pipes for good street streams; water hammer, or ram; proper use of shut-off nozzles; electrical conductivity of fire streams.

Chap. 8 Sprinkler System Calculations

Chap. 9 Fire Apparatus Pumps
including descriptions of piston, rotary and centrifugal fire apparatus pumps; calculations of discharge from pumps; pump primers; parallel-series type of pump; pump horsepower calculation; pump discharge at different pressures; ratings of pumps; pump slippage; maximum pressure limitations.

Appendix: Tables Covering the Following:
Static pressures; fire streams supplied by different sized mains; contents of cylinders, cylindrical tanks, cisterns; circumferences and areas of circles; square roots; conversion tables; ranges of fire streams; friction loss in hose; discharges from nozzles.

This book brings thoroughly up-to-date the subject of hydraulics as it pertains to every phase of fire fighting—in simpler, more understandable, and more complete form than ever. Not only that, it embraces, as well, many important angles that have never before been covered anywhere. For example, there are formulas of greater accuracy for finding friction loss and nozzle and engine pressures of small fire hose layouts; methods are shown for making quick hydraulic calculations at fires without the aid of pencil and paper; friction loss in water mains and hydrants is fully covered; calculations are given for automatic sprinkler systems, as well as for Bresnan distributor, fog nozzle and dewatering siphon problems. These are only a few of the important subjects covered.

All in all, "Fire Service Hydraulics" is a book every progressive fire fighter from the Chief down needs and should have. It is a "must" particularly for men studying for promotion because it gives the answers to many new questions that are bound to come up in future examinations.

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Specify ATLAS when you want dependable life nets.

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26 Warren St. New York 7, N.Y.

Department died November 17 at his home in New London following a three months' illness. He was a fireman more than 30 years and a deputy chief since June, 1943.

Chief McGrath was appointed a regular fireman in the New London Fire Department in August, 1920, but prior to that was a member of the Nameaug Engine Company volunteer organization for seven years. He was a member of the Connecticut State Firemen's Association; the Uniformed Firemen's Benevolent Association; New England Association of Fire Chiefs, and the New London County Fire Chiefs' Association. He served in the First World War. He leaves a wife, father, four sons, one in the Navy, and a brother and sister. He was buried with full ceremonial services November 20.

Chief Carl Kiessling Dies

Fire Chief Carl J. Kiessling, 55, died in Worcester, Mass., City Hospital November 11, following a cerebral hemorrhage suffered a week before.

Chief Carl J. Kiessling

Chief Kiessling was a native of Worcester and joined the fire department December 23, 1912, being assigned to Ladder 3 at headquarters. There, as a rookie, he polished the brass in the quarters he was to occupy as fire chief from 1938 until his death.

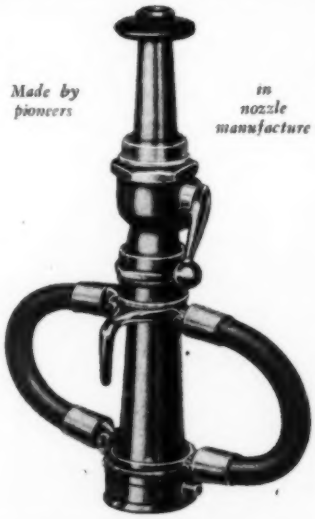
The following autumn after his appointment he was transferred to Ladder 7. At that time all apparatus was drawn by horses. When the gasoline pumper was bought in October, 1914, he was assigned to Engine 4. He had the distinction of driving the first motorized ladder truck in the city.

Kiessling was promoted to lieutenant on March 4, 1920, and became captain June 27, 1921. In 1922 he was made district chief.

As captain of Engine 2, Chief Kiessling made his longest run as a fireman —to Woonsocket, in 1922 when a major fire threatened that city.

He was given a provisional appointment as acting deputy chief on February 16, 1937, and officially became deputy chief in October of that year—the first deputy to assume the office after competitive examination.

On February 8, 1938, after the retirement of Chief Charles McCarthy, he

"All American Choice"
Made by pioneers in nozzle manufacture

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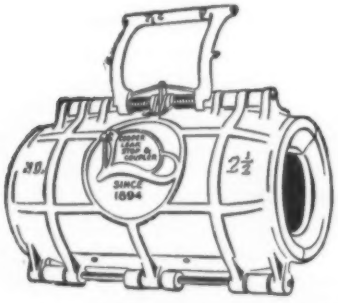
Production Facilities now on Peace Time basis
Be prepared to handle hose leaks with the new lightweight genuine triple lock COOPER HOSE JACKET. Furnished in two sizes—2½" and 1½".


In use by fire departments since 1894. It is the original leak stop and Universal Coupler. "Look for the Helmet."
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Our turnout suits are giving excellent satisfaction in most of the large fire departments throughout the U. S. and
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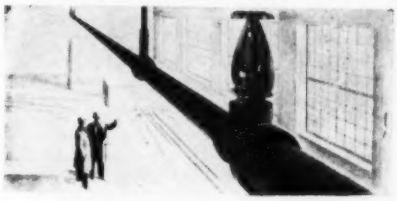
FOR ORDINARY RISKS · · · · ON GUARD 24 HOURS A DAY

Grinnell Automatic Sprinkler Systems protect over 70 billion dollars' worth of property. When fire occurs, heat causes the sprinkler head above it to open at a predetermined temperature and release a deluge of water on the fire.



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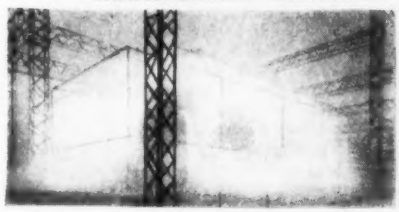
FOR FLAMMABLE LIQUIDS · · · · PROTECTS 20,000,000 KVA TRANSFORMER CAPACITY

Grinnell Mulsifyre Systems extinguish fires in flammable liquids. Widely used to protect transformers, oil lines, quench tanks and bilges of oil-burning ships. A permanent piping system equipped with either high or low velocity heads. Water spray converts burning liquid into an emulsion incapable of burning.



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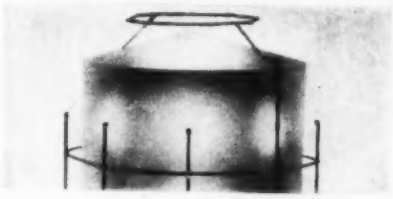
Grinnell Mulsispray System protects tanks when exposed to adjacent fires. Protection is afforded by cooling the surface of the tank below the flash point of the contained gas or liquid.



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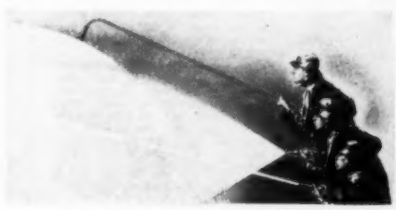
Grinnell FlameBuster is a three-purpose portable hoze nozzle. Low velocity spray, from 4′ or 10′ applicator, for stubborn fires in light, flammable liquids; high velocity spray for fires in heavier oils; and solid stream for mopping up operations.



For complete information on any of these systems, write Grinnell Co., Inc., Executive Offices, Providence 1, R. I. Branch offices in principal cities.

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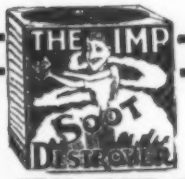

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Cleans Chimneys

PREVENTS CHIMNEY FIRES • • • •

PUTS CHIMNEY FIRES OUT • • • •

Soot and creosote causes most chimney fires. Chief, you can prevent and fight these fires the modern way; Spare your boys the danger of rushing to chimney fires, and climbing over wet, slippery, icy roofs — just throw one package of IMP on the burning embers of furnace, stove, or fireplace and the chimney fire is out in a few seconds. Fire Chiefs all over the country use IMP. They praise and recommend IMP more than we do as the most economical and greatest chimney fire extinguisher in the world. IMP has given 48 years of honest service. Costs only 55c. per package. You can even sell IMP if you wish to.

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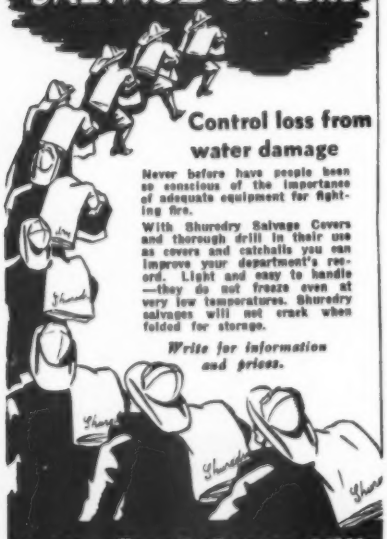

Control loss from water damage

Never before have people been so conscious of the importance of adequate equipment for fighting fire.

With Shuredry Salvage Covers and thorough drill in their use as covers and catchalls you can improve your department's record. Light and easy to handle —they do not freeze even at very low temperatures. Shuredry salvages will not crack when folded for storage.

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became provisional chief to which post he was formally appointed on December 13, 1938.

Chief Kiessling was married to Marion A. Hamill in 1926. They had no children. He was a member of the Massachusetts Fire Chiefs' Club; New England Fire Chiefs' Association; International Association of Fire Chiefs; Executive Council of Worcester Area Council of Boy Scouts; Montacute Lodge, F. & A. M.; Hiram Council, Eureka R.A. Chapter; Worcester County Commandery, K.T.; Shrine Club; Worcester Safety Council; Rotary Club, and Aleppo Temple, Boston.

Besides his wife he leaves one brother, Fred W.; one sister, Margaret; two nephews and five nieces.

Hugh Keenan New Haven Commissioner

Hugh A. Keenan, widely known, popular, "unofficial photographer" of the New Haven, Conn. Fire Department, has been appointed a Fire Commissioner of that City by Mayor John W. Murphy. His term will expire on February 1, 1947.

Hughie, as his many friends in the fire service know him, achieved renown with his photographic recordings of fires and firemen's training in the City of New Haven. A funeral director by profession, his hobby has been motion picture photography, with emphasis on the fire service. One of his best known accomplishments is the New Haven Fire Department colored movie, "Safeguarding New Haven" which has been widely shown throughout New England.

Harold Burke Made Captain

Commander Harold J. Burke, U.S. N.R., on military leave from the New York Fire Department since February 3, 1941, was promoted to the rank of Captain, effective December 1.

Captain Burke is head of the Navy's fire-fighting program in the Bureau of Ships, in which capacity he has in great measure been responsible for the numerous developments in naval fire-fighting technique and equipment.

The story of Captain Burke, and of these developments is told in two recent articles in FIRE ENGINEERING: "Navy Fire Fighting Techniques to Benefit Cities" by Jerry Daly, in the October issue, and "Impact of Wartime Fire Defense Upon Peacetime Fire Fighting" by the then Commander himself, in the November issue.

Dr. W. F. O'Connor Heads Up Safety Engineering

Dr. William F. O'Connor has been appointed to the newly created post of Safety Engineering in the New York University College of Engineering, effective November 1, 1945.

Dr. O'Connor is one of four professors from as many engineering colleges chosen to cooperate in a national plan to introduce safety engineering to engineering students at the college level.

Dr. O'Connor received the B.S. degree from Manhattan College in 1931 and the M.S. in 1932. At Columbia University he was awarded the M.A. in 1933 and the Ph.D. in Chemical Engineering in

The element of time is of first importance in the successful treatment of burns. If a burn is treated within 15 minutes after it occurs, the probability of blister formation is reduced to a minimum. But if time is wasted before proper treatment is started, serious complications and infection may follow.

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Gebauer's TANNIC SPRAY is a practical *first* first-aid treatment for first, second, and small area third degree burns. Write for literature.

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IT'S DIFFERENT IT'S BETTER!

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They are equipped with quick action doors, and are non-interfering of the shunt and successive type circuit.

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Sixteen round succession non-interfering fire box with grounding device.

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The GUIDED Radio Portable Electric Megaphone* utilizes to the full that finest of all signals—the human voice, actually amplifying voices 2,500 times! Commands are HEARD—heard clearly, even though the speaker is a mile or more distant.

Instantaneous in action; capable of sending the speaker's voice high above the tumult of a fire or a crowd, GUIDED Radio Electric Portable Megaphone serves the Fire Chief, Police Officer, Race Starters and Athletic Officials.

Light in weight; equipped with internal batteries and charger; really a marvel of efficiency that withstands rain, snow, hail, ice or intense heat, without detriment to any part. Lower-powered dry-battery-operated model also available.

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FIRE HOSE DRYER

- Is easier to use
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- Improves building design
- Air-conditions as it dries

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1935. He taught Chemistry and Chemical Engineering at Manhattan College from 1931 to 1935 and in the latter year was appointed Professor of Chemistry and Chairman of the Department of Chemistry at Manhattan. Post-doctorate study was undertaken at New York University. Many municipal fire officers attended courses in industrial safety directed by Dr. O'Connor at Saunders Trade School, Yonkers, N. Y., while he was connected with Manhattan College.

In 1942, Dr. O'Connor became associated with Koppers Company, Inc., as a chemical engineer. He worked on the design, construction and operation of the largest butadiene-styrene plant in the United States built by Koppers as part of the synthetic rubber program. He was in charge of training courses for laboratory assistants and plant operators, as well as courses in supervisory training. He organized and directed the work of the Fire and Safety Department, which was responsible for the safety program and accident prevention work, fire prevention and protection, industrial hygiene, welfare, compensation and control of hazardous work and repairs.

Dr. O'Connor is a member of the American Chemical Society, the Electrochemical Society, the American Society of Safety Engineers, the American Public Health Association, the New York State Sewage Works Association, Phi Lambda Upsilon and Sigma Xi. He lives in Yonkers, N. Y.

October Fire Losses Up

Estimated fire losses in the United States in October were $34,470,000, an increase of $2,023,000, or six per cent over September, 1945, and $2,297,000, or eight per cent higher than October, 1944, it was announced by W. E. Mallalieu, General Manager of the National Board of Fire Underwriters.

This is the highest October loss reported since October, 1931, when the figure was $35,501,530.

The Board's estimates are based on incurred losses reported by member companies, plus an allowance for uninsured and unreported losses.

Losses in the twelve months ended with October 31, 1945 are estimated at $450,999,000 as compared with $420,360,000 for the year ended October, 1944.

Convention Dates

Association secretaries are invited to send names of officers and convention dates for listing here.

Jan. 8-11—FIRE DEPARTMENT INSTRUCTORS CONFERENCE. Annual meeting. Memphis, Tenn. Secretary, Emmett T. Cox, P. O. Box 1089, Chicago 90, Ill.

June 3-5—NEW YORK STATE ASSOCIATION OF FIRE CHIEFS. Annual meeting. Elmira, N. Y. Secretary, Chief Henry F. Drake, Clinton Corners, N. Y.

June 18-21—ILLINOIS FIRE COLLEGE. Annual meeting, University of Illinois, Champaign-Urbana, Ill. Secretary, Chief R. W. Alsip, Fire Headquarters, Champaign, Ill.

Oct. 15-17—ILLINOIS FIREMEN'S ASSOCIATION. Annual meeting, Quincy, Ill. Secretary, Chief R. W. Alsip, Fire Headquarters, Champaign, Ill.

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THE WOOSTER BRASS Co.
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RAISE (to erect) **RAZE** (to destroy)

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When you specify products bearing the TRUMPET trademark, you can SAVE and BANK on SAFETY.

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NATIONAL DEFENSE
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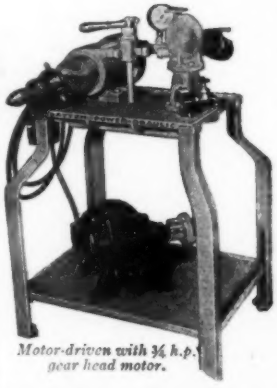

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★ Expands couplings from ¾" to 6" size.

Tests hose up to 700 lbs.

Extra attachment removes old expansion rings from old couplings. No manual effort needed. ★

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Cardox Airport Fire Trucks . . . designed to meet the needs of *civilian* airports and utilizing principles and techniques developed by Cardox to provide crash-fire protection at vast military air fields . . . provide a scope of protection that merits your careful investigation.

Speed and Capacity that Saves Lives and Protects Property

Self-contained . . . highly mobile . . . geared for easy maneuverability . . . the Cardox Airport Fire Truck packs the terrific wallop needed to knock out crash fires fast and make possible speedy rescue of plane personnel. Tons of liquid CO_2 can be released onto the fire zone in approximately one minute, if necessary. Backing up this big supply of zero-cold, fast-acting carbon dioxide are hundreds of gallons of foam solution . . . which blankets exposed gasoline and hot metal surfaces during and after extinguishment to prevent possible reignition and spread of fire.

In actual service on crash fires involving multi-motor planes, frequently carrying thousands of gallons of aviation gasoline, this unmatched "mass attack" of a Cardox Airport Fire Truck has literally overwhelmed raging infernos . . . permitting rescue of personnel in seconds after the truck reached the scene of the crash.

New Bulletin Gives Full Facts

Because of its broad experience in crash-fire protection, Cardox can help you plan how best to meet this Air Age problem. There is no cost or obligation. Write for details and Bulletin 19125, giving interesting data on design, operation and performance record of Cardox Airport Fire Trucks.

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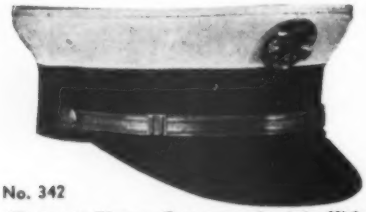
FIREMAN'S UNIFORM CAPS
Union Made **Prompt Delivery**



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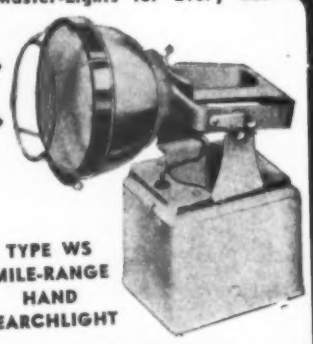

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- SLIP SPARE BATTERY IN PLACE IN 20 SECONDS
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"MASTER ★ LIGHT ★ MAKERS"

The Watch Desk

(*Continued from page 937*)

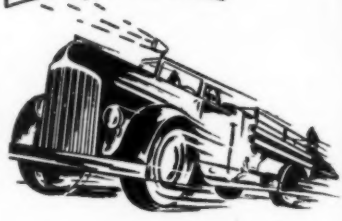
Kenneth S. Yale, Long Branch, N. J., was injured in a vain effort to save the life of Miss Valentine Mazza, 18, who was burned to death in a fire that destroyed her two-room apartment. . . . Firemen extinguished a small fire in the former J. P. Morgan mansion, Glen Cove, L. I., which was recently taken over by the Soviet Government. . . . Six guests were burned to death in a fire which destroyed the Oaks Hotel, Fort Bragg, Cal. Eight persons were injured seriously after jumping from windows of the two-story wooden building. . . . In Jersey City, N. J., Robert Philhee, 8, wanted to see what would happen when he threw a lighted match into a can of gasoline. He is in Jersey City Medical Hospital with third degree burns. . . . Thirty fire alarm boxes in Worcester, Mass., were put out of commission when an automobile hit box 8121 at 11:15 P.M. one night. The box, broken off by the impact, was wedged under the transmission case of an automobile parked in a filling station 150 feet distant. The hit-run driver was not apprehended (Thanks Contrib' Lancaster). . . . One man was killed and fifty or more persons injured, some seriously, September 27, in Cincinnati, Ohio, in the flaming crash of a streetcar with an automobile and a second street car on one of the city's steepest highways. Firemen had a busy few minutes. . . . In Charlotte, Mich., Glenn Jones, 42, and his daughter, Phyliss, 13, died when their home burned. All four members of the family left the house when the fire started, but the girl returned to get some clothing, and the father followed her. . . . Thanks Edw. Spranger, for the clipp's—and you, too, Earle Robinson! They'll be used, eventually. . . Said the wayward press, "perhaps a desire to see his father right away prompted one little five-year old to call the Village of Mamaroneck, N. Y., fire trucks to the corner of Hunter and Henry streets . . . on a false alarm. His father is a member of the Fire Department." Write your own caption. . . . N.Y.F.D. Order, dated October 11, instructed company building inspectors in addition to their regular duties, to make a search of tenement house cellars, to locate accumulations of refuse, old lumber, boxes and barrels which, in their opinion, were being stored for Election Night bonfires. . . . Mayor LaGuardia, New York City, has signed a local law permitting smoking in theatres that do not have balconies, loges or mezzanines. No more than one-third of the orchestra seats may be designated for smoking and "fireproof facilities" must be provided.

Minors May Act as Volunteers

Minors under 18 years of age may act as voluntary firemen, Attorney General Nathan L. Goldstein of New York State ruled on December 3, but those who are required to attend full-time school may not be excused to answer alarms or extinguish fires.

The opinion was requested by the Department of Labor, which asked whether certain provisions of the labor and education laws relating to the employment of minors apply to those under 18 years of age engaged as volunteer firemen.

SIRENO



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Fire Chiefs and Officers

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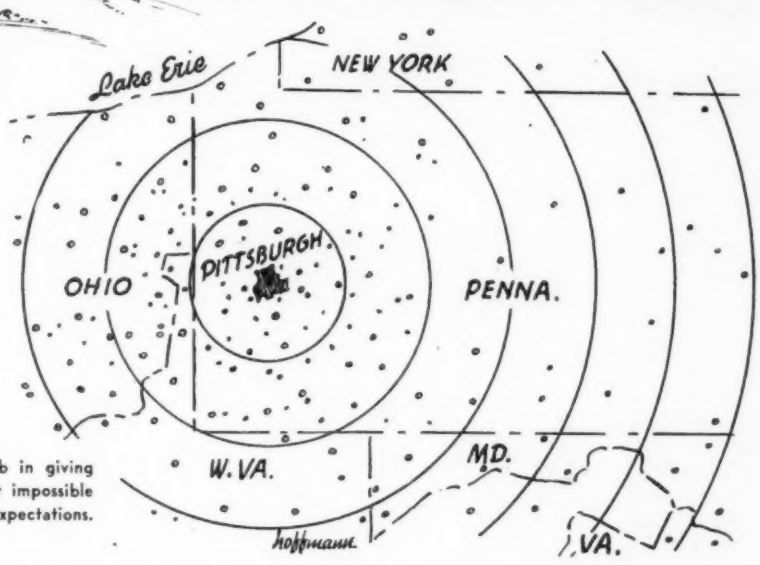
Considering these unfavorable conditions, it is significant that wherever Link equipment is installed, it is doing an outstanding job in giving trouble-free performance. A job believed almost impossible by some and always cited as surpassing all expectations.



PARTIAL LIST of LINK RADIO USERS IN THIS AREA

PENNSYLVANIA

Police
Altoona
Ambridge
Baldwin Twsp.
Beaver
Beaver Falls
Bethel Twsp.
Brentwood
Charleroi
Crafton
Dormont
Fox Chapel
Hanover
Indiana Twsp.
Ingram
Latrobe
McKees Rocks
Monnessan
Monongahela
Mt. Lebanon Twsp.
New Castle
O'Hara Twsp.
Penn Twsp.
Pennsburg
Pittsburgh
Pottsville
Scranton
Shaler Twsp.
Sharon
Sharpsburg
Uniontown
Warren
Washington
West Mifflin
West View

Utilities
Duquesne Light Co.
Peoples Natural Gas Co.
Pittsburgh Railways Co.
Penna. Electric Co.
Penna. Power & Lt. Co.
W. Penn Power Co.

Commercial
Homestead Steel

OHIO

Police
Alliance
Ashtabula
Barberton
Bellaire
Cambridge
Campbell
Canton
Chillicothe
Circleville
Coshocton
Dayton
Euclid
Galion
Geneva
Girard
Indian Hills
Jackson
Lima
London
Lowellville
Madison County
Mahoney County
Mansfield
Massillon
Niles
Port Columbus
Portsmouth
Ravenna
Richland County
Rocky River
St. Clairsville
Salem
Sandusky
Sebring
Springfield
Stark County
State Hway. Ptl.
Toledo
Trumbull County
Uhrichsville
Warren
Wayne County
Wellsville
Wooster
Youngstown

Utilities
Dayton Pwr. & Lt. Co.
Ohio Power Co.
Ohio Public Service Co.
Ohio Edison Co.
Toledo Edison Co.

Commercial
Curtiss-Wright Corp.
Ravenna Ordnance
Plum Brook Ordnance

NEW YORK

Police
Amherst
Binghampton
Broome County
Canton
Endicott
Johnson City
Lockport
State Police

Utilities
Home Gas Co.
N.Y. State Natural Gas Co.

Commercial
Bell Aircraft Corp.
Curtiss-Wright Corp.

WEST VIRGINIA

Police
Charleston
Hollidays Cove
Moundsville
State Police
Weirton
Wheeling

MARYLAND

Police
Cumberland
State Police

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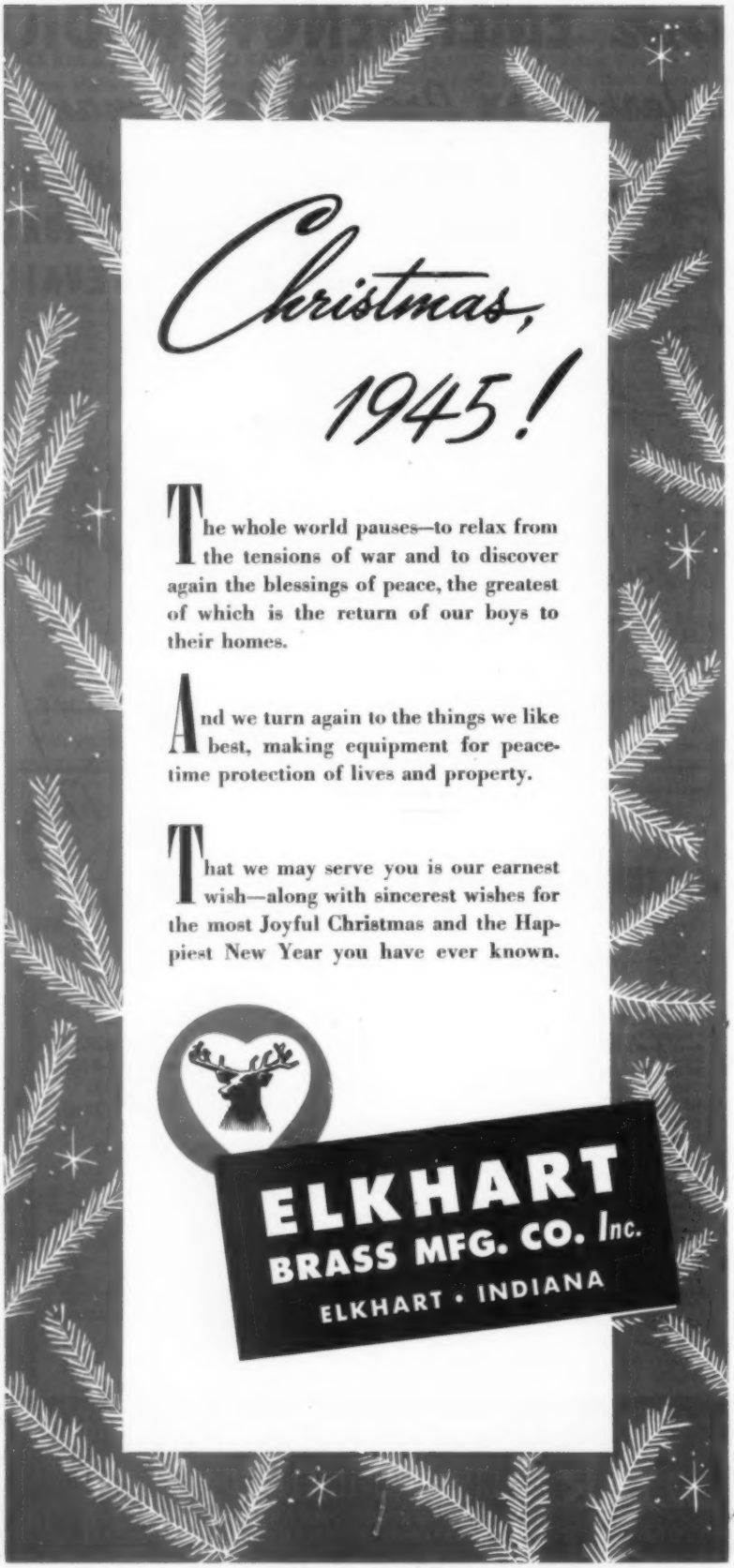
Christmas,
1945!
The whole world pauses—to relax from the tensions of war and to discover again the blessings of peace, the greatest of which is the return of our boys to their homes.
And we turn again to the things we like best, making equipment for peacetime protection of lives and property.
That we may serve you is our earnest wish—along with sincerest wishes for the most Joyful Christmas and the Happiest New Year you have ever known.
ELKHART
BRASS MFG. CO. Inc.
ELKHART • INDIANA

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FIRE ENGINEERING

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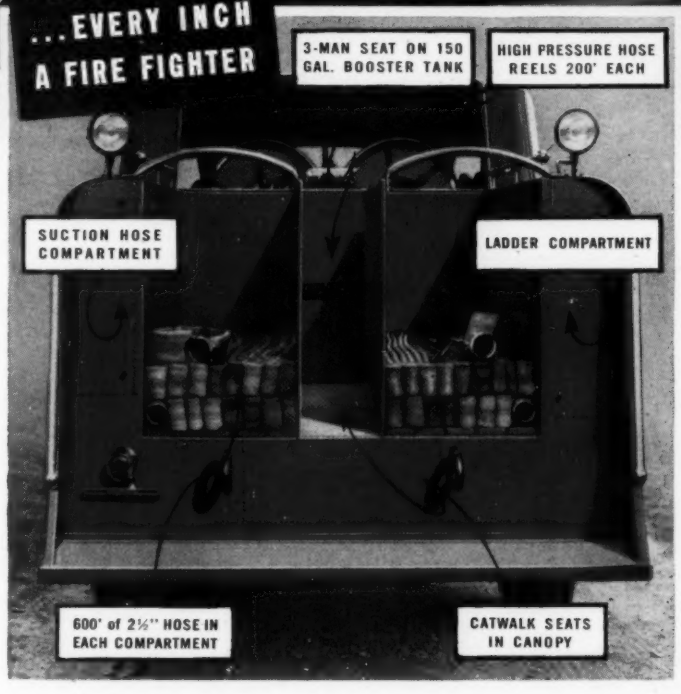
ROOM FOR SIX MEN
CANOPY TOP . . . OPEN IN BACK FOR QUICK EXIT TO REAR WHERE HOSE IS CARRIED
ALL CONNECTIONS AND CONTROLS ENCLOSED—TO PROTECT THEM AGAINST FREEZING, SNOW and ICE
NO RUNNING BOARD ELIMINATES MEN STANDING ON SIDES —A SAFETY FEATURE
SPFD

FWD ENGINEERED . . TO GIVE YOU MORE AND BETTER FIRE-FIGHTING FEATURES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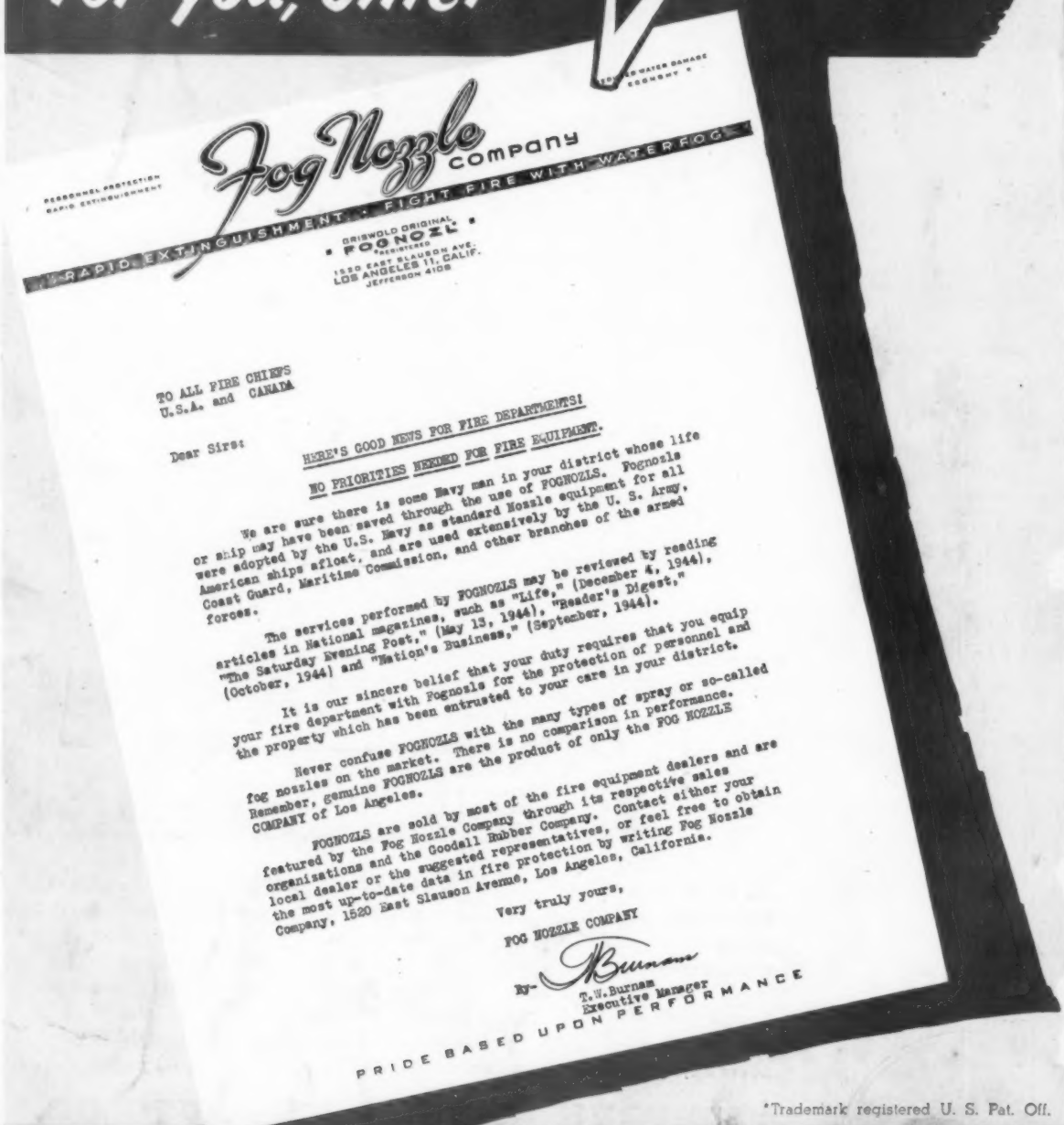

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